Report

of the

Medical Officer of Health

City of Glasgow

1949

THE CORPORATION OF THE CITY OF GLASGOW

W5246

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Supervisor of Midwives	Miss Agnes B. Hunt
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PREFACE

In presenting my annual report on the Health of the City for 1949, I wish to direct attention to some of its principal contents, to comment briefly on matters of interest which have special bearing on the health and welfare of the population, and to indicate particular aspects of the work of the Department where there has been development or progress during the year. This preface can only hope to draw attention to some of the more important features of the report, to which reference must be made for detailed information.

VITAL STATISTICS.

The sections on population and vital statistics outline the changes in the boundaries of the municipal wards of the city and detail the reason for retaining the estimated population of the city at 1,110,000. In addition, the tables show how the birth rate at 18·85 has returned to its normal pre-war figure, while the death rate from all causes at 12·79 per thousand of the population is the second lowest in the history of the city. A table summarising the death rates per million from the principal causes has been included, and it will be seen that deaths from diseases of the circulatory system now contribute more than 30 per cent. of the total mortality from all causes, while over 1,000 persons in Glasgow still continue to die each year from tuberculosis. A section on the increased incidence of cancer is also included which illustrates the greater mortality among men from this disease. On the credit side, it is most satisfactory to report a record low infant mortality rate of 49, the first time in the history of the city that it has fallen below 50. Some of the reasons for this reduction are given in the text. They include favourable weather conditions, improved standards of child care by mothers, fewer deaths from gastro-enteritis, due, it is believed, to the intensive anti-fly campaign recently developed throughout the city (see Section VIII).

Maternity and Child Welfare.

In section III comment is made on the effect of the new legislation on the work relating to maternity and child welfare where it has already become apparent that the tripartite control of the maternity services is in many respects unsatisfactory. There is no doubt that in the interests of everyone some effort should be made to establish a properly integrated maternity service for the country. During the year two new child welfare centres which had been under construction became available. The new clinics which are of one storey, built of brick with roughcast on the outer walls, are situated in the Pollokshaws and Netherton (Knightswood) area respectively. The accommodation includes an ante-natal examination room, infant and child welfare clinic, along with facilities for treatment. including dental treatment of school children. It is unsatisfactory to record a decline in the total attendances at ante-natal centres from 79,278 in 1948 to 64,703 in 1949, and it is sincerely hoped that this decline will be merely temporary. The part played by the ante-natal clinic as a centre of teaching in every-day hygiene and mothercraft cannot be over emphasised. It is not possible for the busy general practitioner, however well intentioned, to cover the scope of the activities of such a centre where women can learn the disciplines necessarily associated with motherhood and where classes of instruction of all kinds are conducted for their benefit.

The Aged and Chronic Sick.

The volume of a Health Department is never static, and the services supplied accurately reflect the public demand. One of the outstanding problems of the present time is the ever growing necessity to care for the aged and chronic sick, and it is not surprising that this year has again seen a large expansion in the Domestic Help Service. The Department now employs over 1,000 home helps, the majority of whom are looking after the elderly and infirm. Others again are attached to the care of domiciliary maternity and tuberculosis cases. A reprint of a paper on the subject of " The Care and Welfare of the Aged and Chronic Sick " has been included as it illustrates the many facets of the problem. An outstanding feature is the present difficulty with which both the

Regional Hospital Board and the Local Authority are faced in dealing with individuals who are not considered suitable for hospital accommodation on the one hand and Part III accommodation on the other.

Tuberculosis and Other Infectious Diseases.

Tuberculosis remains the paramount infectious disease. In fact, 2,829 new cases of pulmonary tuberculosis were notified during the year, the highest total since 1910. The problem set both Local Authority and Hospital Board is thus an immense one, for to this number must be added all those persons on the register from previous years who still survive and require treatment by supervision or rehabilitation. Only intense effort utilising every weapon in the armoury ; hospital, sanatorium, out-patient treatment, rehousing, contact tracing and B.C.G. can hope to reduce and ultimately control this great scourge which wrecks the lives of countless individuals and destroys the happiness of homes.

With the exception of tuberculosis, it has been a satisfactory year regarding infectious diseases generally. For example, typhoid fever reached its lowest recorded level in the city, and the decline in the number of cases of venereal disease has been maintained. It is disturbing to note the fall which has taken place in the number of children being protected against smallpox since compulsory vaccination was suspended in 1948, and also in the number of children being immunised against diptheria. A glance at the table on page 63 would convince the greatest sceptic of the indisputable efficiency of diptheria immunisation, and all should be united—councillors, health workers, teachers and parents—in seeing that no child in this city is left unprotected in this respect.

Housing, Etc.

Although the number of houses provided during 1949 by the Corporation was the highest on record, it is still woefully short of what is required. Owing to the large waiting lists, comparatively few closing or demolition orders were executed, and indeed the bulk of the houses

condemned as unfit were dealt with by the Master of Works as dangerous buildings and not, as in pre-war years, by the Health Department.

The work of the Disinfestation Unit has been continued on an even larger scale, the results being most satisfactory. During 1949 the Unit's activities were extended to deal with the house-fly at its breeding ground. The results of these measures have still to be ascertained. At the end of this report, in the section dealing with the general sanitary operations, a most satisfactory experiment for cockroach destruction on a large scale in the South-Western Division is recorded.

Bacteriological Laboratory.

Section IX deals with the Bacteriological Laboratory, and reference is made to the fact that this year the Laboratory attained its Jubilee, the service being inaugurated in 1899. From humble beginnings this service has been gradually built up until over 88,000 examinations were carried out during the course of the year. The Laboratory primarily serves the Department, but in addition carries out work for the Regional Hospital Board and Local Health Authorities situated outwith the boundary.

Health and Welfare.

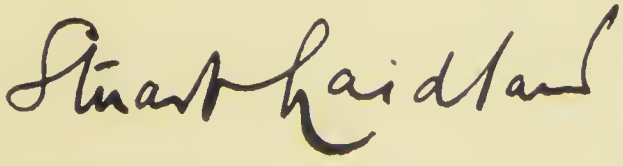
There can be no doubt that the outstanding feature of the year was the Corporation's decision in March to amalgamate the Public Health and Welfare Services Departments and place under one administration all those services relating to health on the one hand and welfare on the other which had previously been supplied separately. The time of the reorganisation was singularly opportune, as it coincided with the retirement of the Public Health Department's Secretary on superannuation, and allowed the combined department to obtain the services of Mr. Thomas Tinto, who had been the acting head of the Welfare Services Department, as Principal Administrative Officer in charge of the Secretarial, Finance and Welfare Sections, thus completing effectively the union of these two great branches of the public service. In June the combined department was renamed the Health and Welfare Department.

The Welfare services outlined in Section XIV are responsible for carrying out the duties imposed on the Corporation by the National Assistance Act, 1948. These duties are extensive and comprehensive, and include the provision of both permanent and temporary residential accommodation for special groups of the population, the provision of welfare services for the blind, deaf, dumb and crippled, the registration and inspection of old persons' homes, the temporary protection of property of persons admitted to hospital, and duties in connection with burial and cremation under certain circumstances.

In addition, the welfare section provides a team of welfare officers who cover a wide range of duties extending from the carrying out of assessments for the home help section to extensive work in connection with the registration and supervision of boarded-out mental defectives. Experience has already shown to what a great extent the general public have come to rely on the welfare section for the solution of many and varied problems. It should be noted that the Department continues to maintain, in co-operation with the National Assistance Board, a 24-hour service at 23 Montrose Street.

It is most satisfactory to be able to report that the combined services are functioning well; that interchange of staff has already been effected with advantage; and that considerable economies in administration and greater efficiency have resulted.

It is once more a pleasure to mention the courtesy and assistance extended throughout the year by the Convener and members of the Health Committee, and to acknowledge the loyal and able service given by all members of my staff.



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OF THE

Medical Officer of Health

FOR THE YEAR

1949

PART 1

SECTION 1

POPULATION, Etc.

The boundaries of the municipal wards of the city were altered under powers obtained in the Local Government (Scotland) Glasgow Wards and Councillors Order, 1948. As these alterations took effect in the first half of the year the vital statistics of the city were altered accordingly and had to be estimated on a new basis.

The total estimated population of the city has been retained at 1,110,000 although the estimate by the Registrar General is lower, namely, 1,105,000. The former figure, however, would appear to be justified on the information available which is as follows :—

Estimated number of children of pre-school age, —5 years	105,036	
Estimated number of children of school age, 5 to —15 years	188,395	
Estimated number of persons, 15 to —21 years ...	100,000	
		393,431
Number on Roll of Electors, 21 years and upwards	729,363	
Patients in mental institutions, say	3,000	
		732,363
		1,125,794

From this figure must be subtracted some 13,000 persons, the net excess of emigration or transfer to England and Wales over immigration from abroad or from England and Wales. To the number must be added the natural increase of the population, etc.

The figures show that the retention of the estimated population at 1,110,000 would seem to be sound and in addition, has the advantage that the birth rates, death rates and rates for other vital statistics

are stabilised until the next census return becomes available which may not be until towards the end of 1951 or the beginning of 1952.

The ward populations have been based on the new survey of electors in the municipal divisions of the city as supplied by the City Assessor, and estimates of the surviving population at the various age periods below 21 years of age less the deaths in the respective age groups.

Ward Populations.—Considerable care has been exercised in obtaining as accurately as possible estimates of the ward populations for it is on these figures that all statistical tabulations of the health conditions of local communities are compared. The ward distribution of the population is given in Appendix Table I.

Some considerable changes have been made in the estimated populations of certain of the wards because of the transfer of families to new houses in other districts, and the consequent alterations of birth rates, together with the differences which have been found at the new survey of electors. These variations are of considerable interest in connection with the provision of schools, churches, shopping centres, etc., quite apart from the distances of the new housing schemes from the former crowded areas from which the families have been transferred and which has necessitated the transporting of children to schools in older areas of the city. The families transferred to the new housing schemes are also of larger size, for a recent enumeration by the Attendance Officers of the Education Department of the number of children of school age in these schemes has shown that in some districts the number of school children per house is double the average for the city. For instance, in Priesthill there were 2·2 children of school age per household and 1·7 in both Rosshall and Cardonald districts, all in the south-western area of the city ; 1·8 in Springboig, 1·6 in Milton and 1·5 in Balornock where large housing schemes have been built by the Corporation, as compared with the city average of 0·6 per house.

Institutional Population.—A special census of persons resident in hospitals, institutions, hotels, etc., is taken each year at 30th June. In 1949 the total was 30,115 compared with 31,385 at the corresponding date of the previous year. The largest number in any one ward is 3,952 in Exchange where most of the hotels are situated. The only increase of note is 138 in Fairfield where 1,795 were returned. The following decreases took place :—Exchange, 369 ; Pollokshaws, 276 ; North Kelvin, 190 ; and Pollokshields, 124.

The institutional population is largely made up of the following groups :—

General Hospitals	3,797
Fever Hospitals	1,712
Mental Hospitals	2,914
Sanatoria and Other Hospitals	5,549
Hotels	2,215
Common Lodging Houses	4,970
Hostels, Etc.	3,399
Special Institutions (Barracks, Etc.)	4,180
Squatters	1,379
	30,115

Acreage.—There has been no alteration in the area of the city which remains at 39,725 acres. The alterations which took place on the redistribution of the wards were reported on a year ago and the acreage of each is given in Appendix Table I. The largest wards are as follows :—

Provan	4,846 acres.
Pollokshields	3,239 ,,
Pollokshaws	3,223 ,,
Cathcart	2,737 ,,

all on the outer edge of the city.

Density.—The density of population is also given in Appendix Table I. The average for the city is unaltered at 28. With the adjustment of the ward populations already referred to there have been consequent changes in the density in many of the wards. The following are the more important differences, the persons per acre for the previous return being given in parentheses :—Increases—Dalmarnock, 94 (84), Mile-End, 97 (89), Woodside, 180 (169), Hutchesontown, 89 (81), Gorbals, 162 (154) : Decreases—Park, 80 (98), Partick East, 72 (84).

Occupied Houses.—The return of occupied houses as at Whitsunday, adjusted for habitant occupiers and shops used as houses, etc., is supplied by the City Assessor. The total for 1949 was 296,431 compared with 293,814, an increase of 2,617. The distribution of these throughout the municipal wards of the city is given in Appendix Table II. The largest increase is in Pollokshields ward where 1,023 more houses were occupied, this increase being largely accounted for by the number of new houses in Corporation schemes. More than three-quarters of these, 760, were four-apartment houses.

Other large increases took place in Pollokshaws (505), Shettleston and Tollcross (412), Springburn (368) and Ruchill (367), almost all these increases also being the result of the occupancy of Corporation scheme houses.

The largest decrease in occupied houses was 111 in Cowlairs ward, most of these being one and two-apartment houses which were demolished. In Park ward the decrease was 53, most of these being single apartments which at one time formed part of houses of larger size. In Kelvinside the decrease was 50, where similar explanations apply. In Govan Ward there was a decrease of 49, due to the demolition of derelict property.

The number of occupied houses in the city according to size is as follows :—

1 Apartment	35,868	Decrease	410
2 Apartments	110,392	Decrease	116
3 Apartments	83,251	Increase	529
4 Apartments	43,348	Increase	2,367
5 Apartments and Over	23,572	Increase	247
	296,431		

Unoccupied Houses.—There were 441 empty houses in the City compared with 314 for the previous year. The largest number was in Kelvinside district, 86 compared with 78 in 1948. As this is one of the good residential wards most of these were probably furnished flats of one or two apartments or houses of large size. The numbers in other wards are relatively small, the largest being 29 in Park and 23 in Partick East.

NUMBER OF UNLET HOUSES.

1 Apartment	107
2 Apartments	89
3 Apartments	86
4 Apartments	59
5 Apartments or Over	100
	441

Dean of Guild Linings.—The housing problem continues to be acute. During the year ended 31st August, 1949, the number of linings granted was 2,065 and although this is considerably more than the 571 linings issued for the erection of houses during the preceding year, the total is quite inadequate to meet the demands for houses, irrespective of the depreciation of the property throughout the city generally,

evidence of which is indicated by the increasing number of tenement buildings which have been condemned as dangerous by the Master of Works.

Details of the numbers of various sizes of houses for which linings were granted are given in Appendix Table III, compared with previous years since 1919. Of the total linings issued during the year, 780 were for three-apartment houses and 1,186 for four apartments, and only 13 for houses of larger size. In addition sanction has been given for the erection of a hostel for single women containing 86 single apartments, to be built in the Partick area.

METEOROLOGY.

There were no great extremes of weather conditions throughout the year except possibly a rather heavy rainfall during the last quarter, chiefly in December when 7·6 inches were recorded. The rainfall for the whole year at 43·2 inches was somewhat greater than usual.

Inspection of the records shows that 1949 was the mildest year for nearly a century and with a relatively dry summer and more than average sunshine it has been favourable to the health of the population. There were no exceptionally warm periods but the mean monthly temperatures were in most instances above the corresponding records for 1948. The average for the whole year was 49·3°F. compared with 48·1°F. for 1948 and 47·4°, the average for the preceding 11 years.

The sunshine recorded exceeded the average, the number of hours of bright sunshine being the highest since 1915. In June alone 254 hours of sunshine were noted and for the whole year, 1,310 hours, the latter figure being 153 hours more than in 1948. Fog was present for only a brief period in November.

HEALTH PROPAGANDA.

In the report for last year mention was made of the interruption of the usual winter series of health lectures following the coming into operation of the National Health Service Act. With further re-organisation of the local health services following on the incorporation of the Welfare Department of the Corporation it was not found possible to resume this form of propaganda except for one central meeting. This was held in the Cosmo Cinema on 5th March, 1950, when a brains trust on "Health and Education" was organised in co-operation

with the Workers' Educational Association. Films on health subjects were exhibited and the following members of the brains trust took part in the proceedings :—

Introduction.
Dr. A. G. Mearns, F.R.S.(Ed.), B.Sc., M.D., D.P.H.

Brains Trust.
Mr. Donald T. Forbes, M.A.
Dr. Arch. R. Miller, M.D., D.P.H.
Councillor Ernest Greenhill, O.B.E., J.P.
Mr. J. Inglis, M.A.

Question Master.
Dr. Stuart Laidlaw, B.Sc., M.D., F.R.F.P.S., D.P.H., D.P.A., B.L.

Leaflets on health by the Scottish Council for Health Education were issued. The audience numbered about 1,000.

The Department, however, has continued to meet the numerous demands of churches, trade union societies, co-operative and other guilds, etc., for talks on health subjects which have been undertaken mostly by the members of the medical staff. Probably one of the most valuable mediums of health propaganda is that carried on continuously throughout each year by the health visitors of the Department who give weekly talks to mothers attending the child welfare clinics, especially when it is remembered that more than half the expectant and nursing mothers still attend these centres. The information and instruction given at these routine talks is almost certainly applied in the households of these mothers and this has no doubt contributed largely to the reduction in infant and child mortality which has taken place during recent years. Parentcraft classes were again held during the winter months. In addition, tutorial and other special lecture courses have been given by the medical staff and tutors to health visitors, municipal midwives and pupils.

Talks on health matters and sex education to parents of school children were undertaken by the medical staff of the Education Health Service Section of the Department. These meetings were well attended and much appreciated.

Lectures on the medical aspects of food hygiene are now an established part of the course for students at the Hotel School, Rosshall. These are conducted by the Medical Officer of Health and Dr. Archibald Miller. In addition the day-to-day instruction and health propaganda carried on by the inspectors of the Food and Dairies Section should not be overlooked.

SECTION II.

VITAL STATISTICS.

With the retention of the population at a basic number of 1,110,000 during postwar years, the vital statistics rates per million of the population adopted for comparison are approximately correlated to the actual number of deaths. With a static population of just over a million the various main groups of causes of death, according to the International Short Classification of Deaths, form a suitable standard indicating the hazards of life of the population generally. In view of the changes that have taken place in the age constitution of the population a detailed analysis based on the age and sex distribution would, however, indicate more accurately any improvement or otherwise in the standard of life of the population generally.

The age constitution of the population of the city in relation to males and females, given in pyramid chart form in the Annual Report for 1945, showed the increasing number of elderly persons, especially those above 65 years. Since then the higher birth rate has added about five per cent. to the child population, while emigration has reduced to some extent the numbers of adults. These changes are of considerable importance in view of the increased social services now to be provided.

The new health legislation has placed on the shoulders of local authorities the duty of collecting and collating statistics pertaining to mortality and to infectious disease. The sources from which this information is obtained includes notification from general practitioners and returns from registrars.

Particulars of causes of mortality together with the rates are given in Table VIII in the Appendix, while the age and sex distribution of the deaths are contained in Table IX.

The following is a summary of the principal vital statistics of the city :—

SUMMARY.

	1945.	1946.	1947.	1948.	1949.
Population	1,050,000	1,075,000	1,100,000	1,110,000	1,110,000
Acreage	39,725	39,725	39,725	39,725	39,725
Persons per acre	26	27	28	28	28
Number of Inhabited Houses	289,028	289,655	291,407	293,814	296,431
Deaths—Number registered	15,112	15,561	16,412	14,638	15,248
Deaths—After correction for Transfers ...	13,941	14,502	15,267	13,620	14,203
Births—Number registered	21,296	25,391	27,237	22,917	21,584
Births—After correction	20,294	23,560	25,829	22,292	20,923
Death rate per 1,000 living—All causes ...	13·27	13·49	13·88	12·27	12·79
Birth rate per 1,000 living	19·33	21·92	23·48	20·08	18·85
Deaths under One Year—After correction ...	1,379	1,588	1,989	1,241	1,033
Deaths under One Year—Per 1,000 births ...	68	67	77	56	49

BIRTHS.

In the above summary is shown the post-war rise in the number of births registered and the return to what had become the normal prewar figure. The highest number registered was 27,237 in 1947, last year the number was 22,917, and this year it has fallen to 21,584. After adjustments for inward and outward transfers the net number of births becomes 20,923. This figure is approximately the average of the war years and between one and two thousand below the numbers in prewar years.

Changing social standards and practices are factors which are affecting the birth rate generally together with the increased cost of maintaining a family, but a more immediate cause is probably the lack of housing accommodation which was already acute previous to the war. Within the limits of the rationing of capital expenditure permitted by the Government and scarcity of materials, the Local Authority is endeavouring to meet this need; but the numbers of houses erected annually are not sufficient to meet the demand—many of the houses indeed being required for replacement of derelict properties which were demolished because of their dangerous condition.

The rehousing of families with young children, that is growing families, on the periphery of the city where the bulk of the housing development has occurred has had considerable effect on the birth rates of the respective wards as shown in Appendix Table V.

There is not now the great variation between high and low ward rates and the differences have been further modified in 1949 by the reduced birth rate following the high postwar numbers. The highest rates, however, are still to be found in the working class wards—

Gorbals, 24·7 (27·8, the rate for the previous year); Cowcaddens 24·0 (26·2); Kingston, 23·8 (25·7); and the lowest rates in the good residential wards—Kelvinside, 11·9 (10·96); Cathcart, 12·2 (12·4); Langside, 12·3 (12·9). Pollokshields, a former residential ward, had a birth rate of 14·75 because a large number of working class families have been accommodated in new housing schemes in Pollok and Penilee districts.

Illegitimate Births.—During the year, 1,165 births were registered as illegitimate compared with 1,265 in 1948. On the total number of births (20,923) this represents a rate of 5·6 per cent. which is slightly less than the corresponding rate of 5·7 for the previous year. The number of illegitimate births in each Municipal Ward and the respective percentage are given in Table V in the Appendix.

The highest ward rate was 11·4 per cent. in Exchange, followed by 9·3 in Park Ward—districts which are situated in the central area of the city. Other wards with rates above the average for the city were Gorbals (8·6); Calton (8·0); Cowcaddens (7·7); and Parkhead (7·3). The lowest rates were 1·6 in each of Camphill and Craigton Wards.

There were 77 deaths of illegitimate children under one year of age, which represents an infant mortality rate of 66 per 1,000 illegitimate births: or 68 if two more deaths, whose legitimacy was not stated, are included. This compares with an infant mortality rate of 49 for the city.

MARRIAGES.

During 1949 there were 10,446 marriages against 11,035 for the previous year. Stated as a proportion of the population this number represents 9·5 per thousand persons compared with 10·0 for the two preceding years. The percentage of persons married as shown in the following summary has been maintained at a higher level during the past ten years than was the case prior to the first world war when the birth rate was 50 per cent. higher :—

MARRIAGES PER THOUSAND PERSONS LIVING.

1871-1880	9·1	1942	11·9
1881-1890	9·3	1943	9·7
1891-1900	9·4	1944	9·3
1901-1910	8·8	1945	11·9
1911-1920	9·7	1946	10·3
1921-1930	8·9	1947	10·0
1931-1940	9·7	1948	10·0
1941	12·1	1949	9·5

DEATHS.

The number of deaths registered in the city during the year was 15,248 which is reduced to 14,203 when adjustments are made for inward and outward transfers. The corrected figure therefore represents a death rate of 12·79 per thousand of the population compared with 12·27 in 1948. This death rate although slightly higher than the rate for the preceding year may be considered satisfactory for a large industrial population which is remaining stationary in number but increasing in average age. Mortality has remained uniformly low at an average of 13·1 during the past five years compared with 14·5 for the five years previous to the war.

The following statement summarises the death rates since 1881 :—

GLASGOW—ALL CAUSES—DEATH RATE PER 1,000 LIVING.

1881-1890	... ...	24·22	1936-1940	... ...	14·55
1891-1900	... ...	21·53	1941-1945	... ...	14·20
1901-1910	... ...	19·56	1946	... ...	13·49
1911-1920	... ...	16·36	1947	... ...	13·88
1921-1925	... ...	15·49	1948	... ...	12·27
1926-1930	... ...	15·04	1949	... ...	12·79
1931-1935	... ...	13·88			

In Appendix Table VI is given the number of deaths in each municipal ward of the city and the relative death rates compared with the rates for the previous year and the corresponding rates in the municipal wards which in many cases were altered when the boundaries were adjusted in 1948. Wards which had high death rates now return relatively low rates—indeed, some are very favourable and are now below the mean for the city (12·79) ; for instance, in Gorbals, the rate was 12·57 compared with 15·61 in 1947 ; Woodside 12·32 against 15·53 ; Mile-End 11·16 against 14·69 ; and Exchange 12·68 against 17·03. On the other hand increases were recorded in Kelvinside, 14·9 compared with 13·2 in 1947 and Fairfield 12·8 against 11·7.

Causes of Death.—The number of causes of death are summarised in the following table :—

SUMMARY OF DEATH RATES PER MILLION FROM PRINCIPAL CAUSES.

	1947.	1948.	1949.
General Diseases—			
(*a*) Infectious	689	300	219
(*b*) Tuberculous—			
(1) Phthisis	1,066	1,142	1,010
(2) Others	224	135	127
(*c*) Malignant (Cancer, etc.)	1,841	1,877	1,940
Diseases of the Nervous System	1,526	1,473	1,489
Diseases of the Circulatory System	3,693	3,425	3,997
Diseases of Respiration	1,147	791	968
Diseases of Digestive System	439	386	377
Congenital Defects and Malformations (including Premature Birth)	789	619	511
Violence	502	490	493
All Other Causes	1,963	1,632	1,664
All Causes	13,879	12,270	12,795

The rates given in the above summary are the totals of the various groups of causes of death according to the International Classification which is given in Appendix Table VIII. As in recent years a considerable part of the reduction in the general death rate of the city is attributable to the reduction in zymotic or acute infectious diseases. These diseases affect mostly the very young children and to a lesser degree children of school ages. The total death rate per million was 219 which is 81 less than last year and is the lowest on record. The greatest cause of mortality in this group is now diarrhoea and enteritis which were responsible for a death rate of 158 compared with 225 for the preceding year. Measles was less fatal with a low rate of 7 against 21, but the death rate from whooping cough was 19 compared with 6 in 1948 and 70 in 1947. As has been explained in recent annual reports these mortality rates are low in comparison with prewar death rates. Fatal termination are often associated with respiratory complications. Mortality from diphtheria and scarlet fever have almost disappeared, the former with a death rate of 4 and the latter 3 compared with the respective rates of 6 and 3 for the previous year.

Cerebrospinal fever caused 9 deaths. There were only 2 from erysipelas and the first death in two years from typhoid or paratyphoid was a female of 56 years of age whose death in an asylum was complicated by pulmonary tuberculosis.

Tuberculosis.—The number of deaths from pulmonary forms of the disease was a little lower in 1949, the rate per million of the population being 1,010 against 1,142 for the previous year. The

mortality rates have remained at a high level since the early years of the war and are contributed to largely by the increased number of deaths among young females between the ages of 15 and 25 and also up to 35 years, and the rising incidence among males over 45 years of age. The heavier incidence in these age periods has been in evidence over a considerable number of years.

On the other hand a reduction has again taken place in the mortality from non-pulmonary forms of tuberculosis, the death rate in 1949 being 127 compared with 135 in 1948 and 224 in 1947. The greatest reduction here is in the rate for abdominal tuberculosis, 11 against 29. Meningeal forms of the disease were more fatal, the rate per million being 85 against 69 in 1948 which was the lowest on record.

Diseases of the Nervous System.—The total rate of mortality in respect of these diseases has remained remarkably steady during the past ten years despite the increasing number of persons at older ages, over 70 per cent. occurring among persons over 65 years. The mortality rate per million of the population, 1,489 is only 16 over the record low rate of 1948. More than four-fifths of the deaths are classified under intra-cranial vascular lesions, the rate for which was 1,231.

Diseases of the Circulatory System.—Deaths from diseases included in this group form more than 30 per cent. of the total mortality from all causes. Almost all are due to heart disease. The total rate per million of the population in 1949 was 3,997. As there are very few deaths under 25 years of age this would seem to indicate that the mortality from rheumatic heart disease which at one time was common among children has been markedly reduced. Almost 89 per cent. of the deaths from heart disease take place at ages of 55 years and upwards. About 70 per cent. were older than 65 years.

Diseases of the Respiratory System.—The mortality from respiratory conditions has been decreasing generally during the past 20 years with occasional remissions. The downward trend was again arrested in 1949, the mortality being equivalent to a rate of 968 per million of the population against 791, an exceptionally low record during the preceding year. Most of the mortality occurs at the extremes of life, especially at the latter end. Annual variations in the rate are generally caused by the prevalence of influenzal pneumonia. Further reference to this group is made in Section IV of the Report.

Diseases of the Digestive System.—Excluding diarrhoea under two years of age, diseases of the digestive system were responsible for a death rate of 377 per million of the population compared with the corresponding figure of 386 for the previous year. In recent reports the heaviest causes of mortality have been charted to show the changes that have taken place since 1920. Mortality from diseases of the digestive system is one of the less important groups of causes of death but including diarrhoea amongst young infants 594 deaths were caused by these diseases in 1949. The rate of mortality is only about half the rates obtaining 25 to 30 years ago.

Hitherto prominence has been given to the mortality from diarrhoeal diseases in connection with the reduction of infant mortality because they form a very considerable part of the infant death rate. Enteritic diseases at older ages are, according to the International Classification of Causes of Death, included in the group of digestive diseases other than peptic ulcers, appendicitis, etc.

Appendicitis.—This disease now takes a toll of around 40 lives per annum. There has, however, been a decided drop in the death rate for the mortality in recent postwar years averaged around 30, whereas in the 1920's the average rate was nearer 90 per 1,000,000 of the population.

Ulceration of the Stomach and Duodenum.—Mortality from these diseases has remained at a uniform level of about 90 per 1,000,000 of the population although there was a definite increase during the first two years of the Second World War.

Other digestive diseases under the International Classification of Causes of Death include principally intestinal obstruction, hernia, cirrhosis of the liver and gastro-enteritis. These diseases as causes of death have declined considerably in recent years.

Nephritis.—Here again there has been a very considerable improvement since the mortality rate of 470 per 1,000,000 of the population was recorded in 1920 to 187 in 1949.

Male mortality is considerably in excess of the female rates after the age of 45 years.

As infectious disease was the problem of the last century so old age and its diseases is becoming the problem of the present century. The steadily increasing average age of the population coupled with the smaller size of families has raised real difficulties by increasing the proportion of elderly folk requiring care and attention. This has had the effect of throwing a considerable burden on the general hospitals of the city.

To meet this great need the Corporation decided to provide accommodation for up to 1,200 persons by the purchase and conversion of suitable large houses. This scheme is described in the section dealing with the Welfare Services which since June, 1949, have been conjoined with the Health Services.

Deaths from Violence.—The numbers of deaths from accidents and other violence since the end of the war have remained uniformly steady at about 350 per annum for males and just under 200 for females. There was a slight decrease in male deaths during 1949 at 337 against 345 during the preceding year, but the comparative figures for females are 210 against 199.

The following summary gives the numbers of deaths at various ages for both sexes. The totals may be compared with 633 male deaths and 283 female deaths which occurred during the " blackout " of 1941.

	Males.					Females.				
	−5	−15	−45	+45	Total	−5	−15	−45	+45	Total
1941 ...	45	57	170	361	633	33	28	44	178	283
1945 ...	37	67	77	179	360	25	19	24	125	193
1946 ...	29	43	81	201	354	28	10	28	133	199
1947 ...	47	39	91	187	364	21	13	24	130	188
1948 ...	38	36	96	175	345	24	10	26	139	199
1949 ...	44	40	101	152	337	29	14	35	132	210

AGE AND SEX DISTRIBUTION.

Details of the sex and age distribution of deaths according to the International Short Classification of Causes is given in Appendix Table IX. A consideration of the total deaths shows that the slightly higher death rate was due to increased mortality in persons over 55, where male deaths numbered 4,850 against 4,569 in 1948 and female deaths numbered 4,842 against 4,215.

The infantile mortality rate was reduced while tuberculosis, cancer, and heart disease accounted for the majority of the deaths in middle life.

CANCER.

Cancer as a cause of mortality is only exceeded by cardiovascular disease. In 1949 there were 2,153 deaths from all forms of the disease compared with 2,084 in the preceding year. Wards with a large proportion of persons of old age usually have heavy rates of mortality ; for instance the highest rate per million of the population are 2,917 in Kelvinside, Langside 2,736, Park Ward, 2,652, whereas in wards with large numbers of young children the rates are usually low, such as Knightswood 1,095, Govan 1,385, Mile-End 1,507.

Mortality in both sexes begins to rise rapidly from the age period 35 to 45 years, deaths among males being in excess of females. As the total number of males at the older ages is less than females the position in which males are placed is even worse than the returns indicate.

The greatest difference in sex incidence is now in cancer of the respiratory system and during the year there were 301 deaths among males compared with 85 for females. The increase of this form of the disease has been marked in recent years and the upward trend was further accentuated in 1949 with an increase of 54 deaths (43 males and 11 females).

Cancer of the stomach is next in frequency. The deaths among males numbered 244 and among females 197 against the respective figures of 224 and 184 for the previous year. The greatest relative difference takes place in the age groups 45 to 65 years when the male deaths are double the female. The same observation applies to disease of the pancreas with 49 male deaths to 27 females, whereas with disease of the liver there are 34 females to 19 male deaths. The ratio of male to female deaths in cancer of the buccal cavity and pharynx was 44 to 11 (i.e., 4 to 1), whereas in earlier years the proportion used to be about 8 to 1.

Cancer of the breast in females has again increased for in 1949 there were 181 deaths from this cause compared with 143 for the previous year. The number of deaths caused by cancer of the uterus

and its appendages has not increased during the past 20 years; neither have male deaths from cancer affecting the genito-urinary tract.

Details of the age and sex distribution of cancer with respect to site of the disease is given on the following page.

Transfer Deaths, etc.—Deaths occurring in the city and transferred to other authorities numbered 1,704, and inward transfers 659, compared with the respective figures of 1,647 and 629 for the previous years. Details are given in Appendix Table VII.

The deaths occurring in hospitals, nursing homes, and other institutions were as follows :—

	1949
General Hospitals and Welfare Institutions	4,291
Fever Hospitals and Sanatoria	935
Mental Hospitals	370
Voluntary Hosiptals	91
Nursing Homes	229
Totals	5,916
Percentage of all Deaths 1949	41·65
Percentage of all Deaths 1948	45·82

Causes of death are shown in Appendix Table X.

GLASGOW, 1949.—DEATHS FROM CANCER IN THE DIFFERENT SITES AS GIVEN IN THE INTERNATIONAL LIST OF CAUSES OF DEATH.

SITE OF LESION.	MALES.									FEMALES.									BOTH SEXES,	Year 1948		
																				All Ages.		
	−15	−25	−35	−45	−55	−65	−75	75+	Total.	−15	−25	−35	−45	−55	−65	−75	75+	Total.		Males.	Females.	Both Sexes.
Buccal Cavity and Pharynx ...	—	—	—	1	4	10	17	12	44	—	—	—	1	2	2	2	4	11	55	54	13	67
Digestive Organs & Peritoneum—																						
(*a*) Oesophagus	—	—	—	1	4	8	10	6	29	—	—	—	1	2	10	13	8	34	63	51	25	76
(*b*) Stomach and Duodenum ...	—	—	1	16	33	70	80	44	244	—	—	1	11	17	32	90	46	197	441	224	184	408
(*c*) Rectum	—	1	—	2	10	21	26	16	76	—	—	—	3	7	19	17	8	54	130	90	56	146
(*d*) Liver and Biliary Passages	—	—	—	—	3	3	9	4	19	—	—	—	1	2	7	20	4	34	53	36	37	73
(*e*) Pancreas	—	—	—	2	3	15	18	11	49	—	—	—	—	7	4	8	8	27	76	30	29	59
(*f*) Peritoneum	—	—	—	—	—	—	3	—	3	—	—	—	—	1	3	1	—	5	8	2	4	6
(*g*) Other Digestive Organs ...	—	—	1	5	12	28	64	35	145	—	2	4	4	14	26	55	56	161	306	151	154	305
Respiratory Organs	—	—	4	26	67	128	60	16	301	—	2	2	7	17	25	22	10	85	386	258	74	332
Uterus	—	—	—	—	—	—	—	—	—	—	—	3	7	27	28	30	12	107	107	—	107	107
Other Female Genital Organs ...	—	—	—	—	—	—	—	—	—	—	—	—	4	21	17	15	6	63	63	—	58	58
Breast	—	—	—	—	—	—	—	—	—	—	—	3	20	38	42	53	25	181	181	—	143	143
Male Genito-Urinary Organs ...	—	—	2	2	1	8	20	32	65	—	—	—	—	—	—	—	—	—	65	80	—	80
Skin	—	—	1	1	1	1	4	6	14	—	—	—	—	—	2	3	8	13	27	13	10	23
Other or Unspecified Organs ...	1	1	2	7	24	34	21	15	105	3	—	5	8	12	18	26	15	87	192	112	89	201
Totals	1	2	11	63	162	326	332	197	1094	3	4	18	67	167	235	355	210	1059	2153	1101	983	2084

SECTION III

MATERNITY AND CHILD WELFARE.

As 1949 is the first complete year since the passing of the Health Service Act, it is appropriate to comment on the effect of the new legislation on the volume and content of the work of Maternity and Child Welfare. Certain aspects of the Service have increased in volume and others have decreased. With regard to the latter, the number of expectant mothers attending ante-natal clinics has fallen from 10,694 in 1948 to 8,572 in 1949. More mothers are being attended by their practitioners for confinement at home, and many of these mothers are not attending the ante-natal clinics. It is generally agreed that the standard of ante-natal care is reflected in the health of the mothers and children. Although it is desirable that the practitioner should supervise the mother whom he is going to attend, nevertheless the ante-natal clinic does provide educational facilities of great importance to the expectant mother. Special talks and practical demonstrations are available at times apart from the clinic sessions and are available to any expectant mother, and it is the earnest wish of the Maternity and Child Welfare Department that a large number of mothers will avail themselves of these facilities. The ante-natal clinics are continuing to act as official agents for the Regional Hospital Board, and approximately 70 per cent. of the mothers who attend the clinics are confined in hospital. A joint scheme for ante-natal and post-natal care between the Local Health Authority and the Regional Hospital Board is at present under consideration. Pending the establishment of this joint scheme, no specific development of post-natal care has been made during the year.

The Domiciliary Midwifery Service is dealt with in greater detail in this section. There is no doubt, however, that the tripartite control of the Maternity Services is not satisfactory, and in the interests of everyone some effort should be made to establish a properly integrated Maternity Service for the country.

With regard to Child Welfare there has been some diminution in the attendance at the clinics. This decrease is to some extent the result of the new arrangements whereby the service of a family doctor is now available for every member of the community and certain of the mothers do not understand the real object of a child welfare clinic. The decrease, however, is not really significant and became less marked towards the end of the year.

Again there was a record low infant mortality rate of 49. Several factors are probably responsible. Except for the first few weeks the weather conditions were favourable throughout the year. Deaths from gastro-enteritis were further reduced from 1948. This reduction is due to improved standards of child care by mothers, to improved treatment of cases, and may also be influenced by the introduction of an intensive anti-fly campaign in the city. Propaganda with regard to gastro-enteritis and its prevention was carried out unceasingly throughout the year.

INFANT MORTALITY.

The total number of deaths among infants under one year of age during 1949 corrected for inward and outward transfers was 1,033 compared with 1,241 during the preceding year. As recently as 1947 male deaths alone numbered 1,146. This year the number of male deaths was only 589.

Although there was a further reduction in the total number of births the infant mortality rate fell from 56 in 1948 to 49 in 1949. This is the lowest on record for the City and is little more than half the rate obtaining as recently as 1944. The following summary gives a comparison of the infant mortality rates during the previous 10 years :—

1939	80	1945	68
1940	95	1946	67
1941	111	1947	77
1942	90	1948	56
1943	82	1949	49
1944	95		

Until 1932 the infant mortality rates in the City never fell below 100, except for one year, and from then until the end of the war the rate averaged 96. The reduction since then has been marked, not only in Glasgow but in almost all other districts throughout the country. The rate for Scotland was 41.

Apart from the Child Welfare Scheme which in Glasgow was more or less fully developed before the war, probably the most important factor in this reduction has been the favourable weather conditions mentioned in the notes on meteorology and which will be referred to later. The number of male infant deaths 589 represents a mortality per thousand male births of 54 compared with 63 for the previous year; female deaths numbered 443 and the infant mortality rate of 44 compares with 47 in 1948. Details of the causes of male and female deaths for each quarter of the first year of life are given in Appendix Table XII. The information there given is summarised in the following statement which shows the relative improvement which has taken place since the movement for the reduction of infant mortality began :—

MALES—	Rate per 1,000 Births.					
Causes of Death	1931-40	1941-45	1946	1947	1948	1949
I. Immaturity	39·4	42·3	39·1	35·3	33·4	27·6
II. Diseases of Respiratory System	24·5	17·6	13·9	14·4	7·8	9·3
III. Diseases of Digestive System	16·3	24·2	14·3	26·7	14·1	9·9
IV. Diseases of Nervous System	3·8	5·4	4·1	2·5	3·1	2·3
V. Tuberculous Diseases ...	1·2	1·3	1·2	1·3	0·8	0·5
VI. Infectious Diseases ...	8·2	4·1	1·5	2·5	0·4	0·9
VII and VIII. All other causes	6·1	4·9	2·3	4·2	3·7	4·0
All causes ...	99·5	99·8	76·4	86·9	63·3	54·5

FEMALES—	Rate per 1,000 Births.					
Causes of Death	1931-40	1941-45	1946	1947	1948	1949
I. Immaturity	33·5	34·5	28·9	30·1	26·1	21·9
II. Diseases of Respiratory System	22·2	14·0	9·5	9·4	6·4	7·0
III. Diseases of Digestive System	12·5	16·1	10·5	18·2	8·8	6·3
IV. Diseases of Nervous System	3·0	4·5	2·6	2·2	1·3	3·1
V. Tuberculous Diseases ...	1·1	1·2	1·4	0·9	0·9	0·6
VI. Infectious Diseases ...	8·6	4·2	1·5	2·9	1·0	0·9
VII and VIII. All other causes	5·2	3·3	3·5	3·0	2·9	4·0
All causes ...	86·1	77·8	57·9	66·7	47·4	43·8
Ratio—Males to 100 Females ...	128	130	131	130	134	123

In 1949 the mortality rate from diseases of the respiratory system was slightly higher, 9 for males and 7 for females compared with the respective rates of 8 and 6 for the preceding year. This slight increase was caused by the prevalence of influenzal pneumonia and other respiratory diseases in the early months of the year. These mortality rates, however, are considerably below those of earlier years.

A considerable reduction, relatively, has taken place in the death rate for diseases of the digestive system, with rates of 10 and 6 respectively for males and females against 14 and 9 during 1948; the rates are in each case only a third of the figures for 1947. This improvement is partly accounted for by the rather cool summers of 1948 and 1949, other factors are the higher standard of cleanliness in milk production, the increasing care exercised by mothers, and the anti-fly campaigns.

Diseases of the nervous system are now the only other important cause of mortality (apart from violence) the mortalities of 2 for males and 3 for females representing 25 male and 31 female deaths respectively. The comparative figures for 1948 were 36 and 14.

There were 7 deaths from pulmonary tuberculosis and 4 from tuberculosis meningitis, while in the infectious diseases group whooping cough was most fatal with 7 male and 8 female deaths. Cerebrospinal fever was the only other fatal infectious disease with 4 deaths, 3 male and 1 female.

The excess of male over female mortality was considerably less as shown by the ratio of 123 to 100 female deaths compared with the ratio for the previous year which was 134. Indeed, this ratio is the lowest since the early years of the century.

The reduction in the infant mortality rate is mainly due to reduction in deaths occurring after the first month of life. Deaths in the first month now bulk increasingly in the total mortality. The main cause of death in this neo-natal period is prematurity. Much more attention is now being paid to the care of the premature child both in hospital and at home, and since 1941 there has been a steady decrease in the number of deaths from this cause. In 1941 the rate for males was 26·36 and 20·68 for females. In 1949 the corresponding rates were 11·75 and 9·20 respectively.

In view of the increasing proportion of neo-natal deaths to the total infant mortality, the principal causes of death in this group have been abstracted for the years since 1920 and have been compared as rates per 1,000 births in the twin charts which are reproduced on pages 40 and 41.

Infant Mortality in Municipal Wards.—This information was given in Appendix Table XI with the corresponding rates per thousand

births compared with previous years. The highest rate, 83, was recorded in Calton Ward and compares with 53 for the previous year. Other high rates together with the corresponding figures for 1949 in brackets, were Gorbals 74 (70), Hutchesontown 67 (44) and Dalmarnock 66 (63), The lowest rate was 21 in Langside Ward, followed by Fairfield with 24, Whiteinch with 32 and Craigton and Cathcart each at 33.

Mortality among Toddlers.—In the Report for last year a chart was introduced to illustrate the great reduction that has taken place in the mortality among toddlers between 1 and 5 years of age, because at one time it was thought that by saving the lives of infants under one, the mortality of the less robust children would be higher at subsequent ages. The death rate per thousand of the child population between 1 and 5 years of age has come down from 39·2 in 1900 to 2·7 in 1948 and a further reduction has taken place in 1949 with a rate of 2·4 as shown in the following table :—

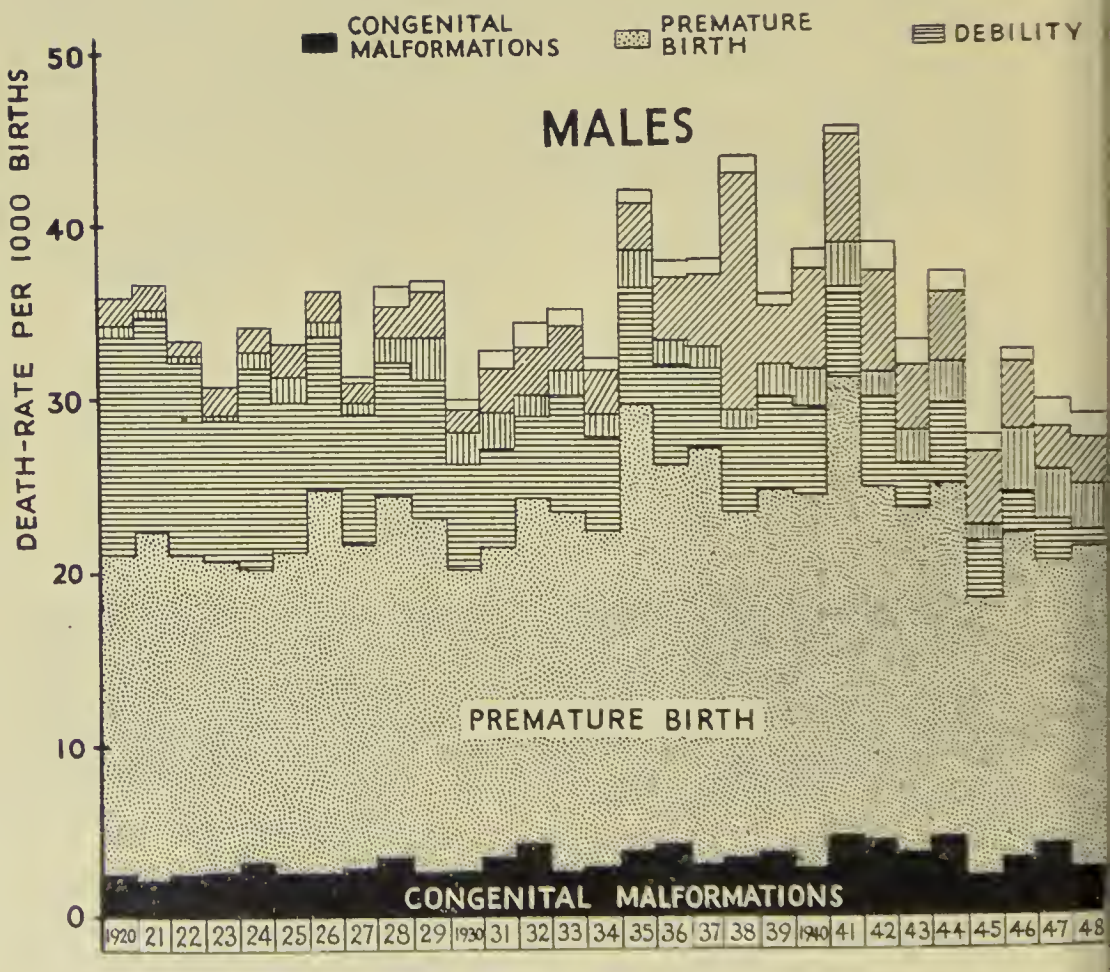
Year	*Infant Mortality Rate per* 1,000 *Births*	*Deaths* 1-5 *Years : Actual Number*	*Rate per* 1,000 *Population at Ages* 1-5 *Years*
1900	153	2,754	39·2
1911	139	1,862	26·7
1921	106	1,494	19·2
1931	105	1,341	17·2
1938	87	753	9·8
1943	82	394	5·3
1946	67	276	3·6
1947	77	296	3·7
1948	56	219	2·7
1949	49	203	2·4

The greatest cause of death in this group was again tuberculosis in its various forms although there was a considerable reduction, 29 male and 25 female deaths against 45 and 36 respectively for the previous year. The other causes of mortality in order of importance were "accidents and other violence," diarrhoea, and respiratory diseases.

Illegitimate Mortality.—There were 77 infant deaths among the 1,165 illegitimate births, which is equivalent to an infant mortality rate of 66. The corresponding rate for the preceding year was 81.

Notification of Still Births.—When the notification of Births Act, 1907, came into force the number of still-births varied around a figure of 42 per 1,000 live births. This rate remained rather uniform for many years and was regarded more or less as a biological constant.

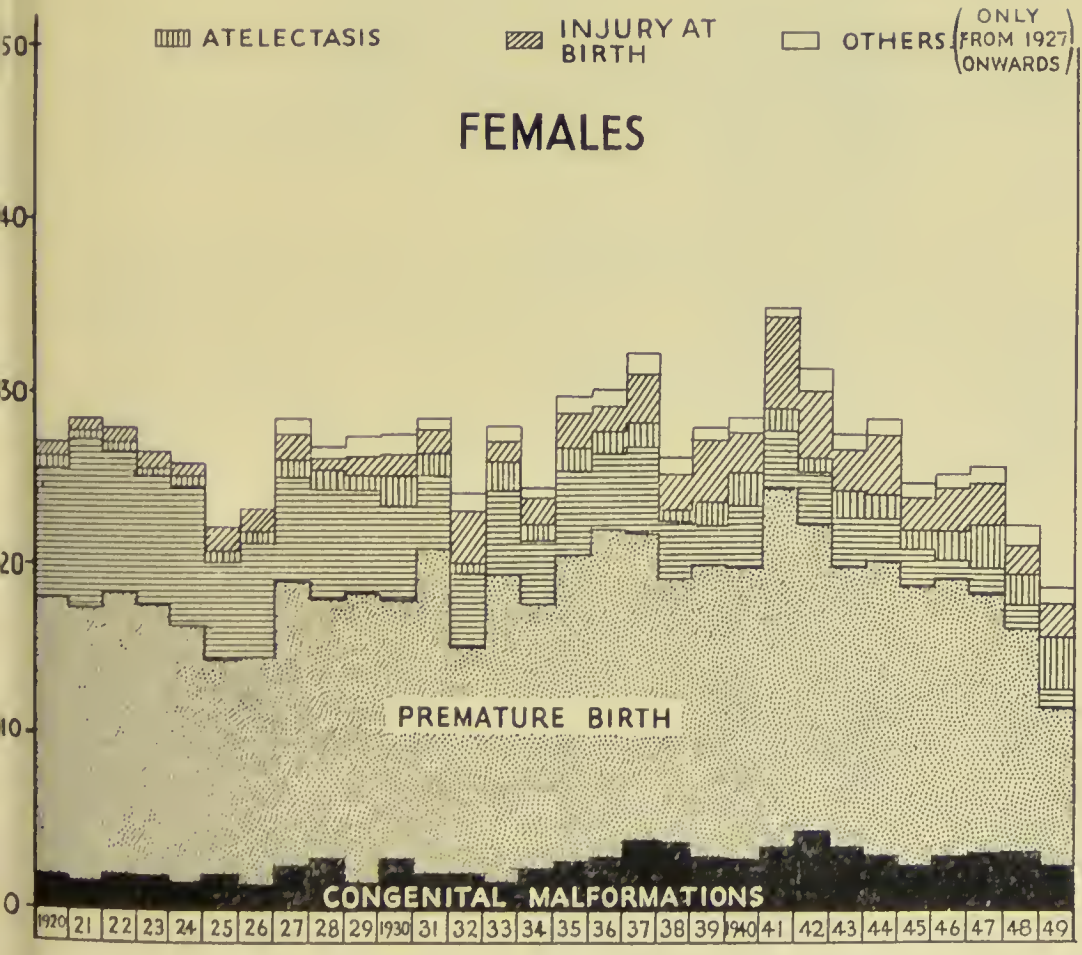
GLASGOW: NEO-NATAL MORTA
FROM DISEASE
1



(Deaths—4 wks. age)

Early Infancy

1949



At that time the birth rate was approximatley 40-50 per cent. higher than the rate now obtaining. During the war years, however, and since then, there has been a steady and striking decline in the still-birth rate, and in 1949 the rate was only 29·6. The improvement is probably largely associated with the development of maternity and child welfare, especially the ante-natal consultation centres at which most working-class mothers attended until the National Health Service came into operation in July, 1948. The improved standards of living and the special priority feeding of expectant mothers have also played an important part.

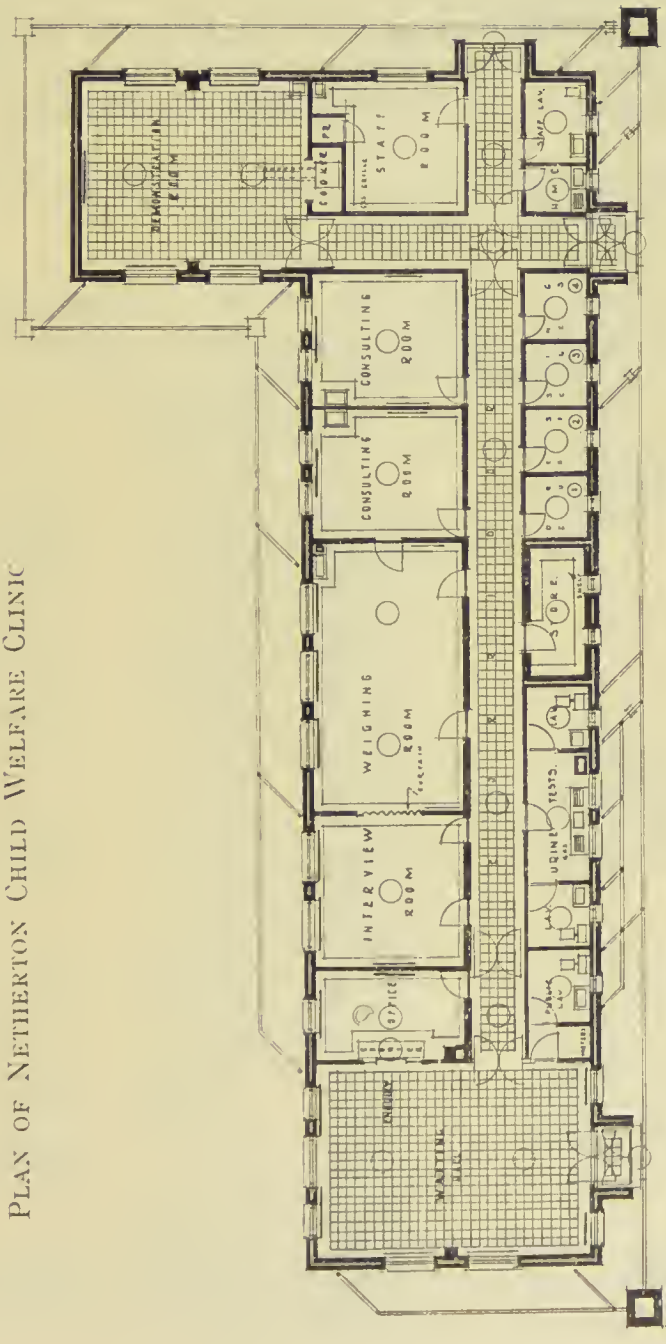
The number of still-births registered in the city during the year was 716 compared with 809 for the preceding year. There were 104 outward and 27 inward transfer still births, so that the net total for the city was 639 against 735. The rate 2·96 per cent. of the total births shows a decrease from the 1948 figure of 3·21.

From information obtained regarding still births reported under the Notification of Births Acts, it is found that 2·0 per cent. of all births attended at home by doctors were still births, and of those medically attended in institutions 4·1 per cent. Together the rate indicated is 3·4. Among non-medically attended births the corresponding rate was 1·3. Detailed statistics are given in Appendix Tables XIII and XIV.

CHILD WELFARE SCHEME.

During 1949 two new Child Welfare Centres which had been under construction became available. In Pollokshaws district the shop premises were no longer suitable for clinic purposes and another clinic was built in Bengal Street and opened on 31st May, 1949. A similar temporary clinic was built in Blackwood Street, Netherton, to serve the Netherton-Knightswood area.

Both these clinics are of one storey, built in brick with roughcast on outer walls, but internal brick partitions are not plastered, the surface of the bricks being painted. The accommodation provided includes ante-natal examination room, infant and child welfare clinic, along with facilities for treatment including dental treatment of school children. There is a waiting hall and administration room and appropriate offices.



PLAN OF NETHERTON CHILD WELFARE CLINIC

The Knightswood Clinic, sketch plan of which is shown on the previous page, was officially opened by the Right Honourable The Lord Provost, Mr. Victor Warren, on 31st October.

Because of rearrangement of office accommodation the weekly clinic at 112 Ingram Street was transferred back to the administration building at 20 Cochrane Street. There are now 22 centres including the one at the Royal Hospital for Sick Children. The total number of weekly sessions is 117, which includes 44 ante-natal clinics, 68 child welfare sessions, and 5 for ultra-violet ray treatment.

In addition, ante-natal and child welfare clinics still continue to be held at the Royal Maternity Hospital.

The time-table of the clinics as now organised is given—

WELFARE CENTRES FOR EXPECTANT AND NURSING MOTHERS AND CHILDREN UNDER FIVE YEARS OF AGE

Address of Centre.	Clinics for Children and Nursing Mothers	Clinics for Expectant Mothers.
20 Cochrane Street ...	Thursday, 9 a.m.	
33 Richard Street ...	Monday, 1.30 p.m. Wednesday, 9 a.m. Thursday, 9 a.m. Friday, 9 a.m.	Monday, 9 a.m. Tuesday, 1.30 p.m.
12 Sandy Road	Monday, 9 a.m. Thursday, 1.30 p.m. Friday, 1.30 p.m.	Monday, 1.30 p.m. Thursday, 9 a.m.
18 Plean Street	Tuesday, 9 a.m. Wednesday, 9 a.m.	Wednesday, 1.30 p.m.
Blackwood Street ...	Tuesday, 1.30 p.m.	Friday, 9 a.m.
Royal Hospital for Sick Children	Tuesday, 9 a.m. Friday, 1.30 p.m.	
15 Glenbarr Street ...	Monday, 9 a.m. Tuesday, 9 a.m. Wednesday, 9 a.m. Friday, 9 a.m. Friday, 1.30 p.m.	Monday, 1.30 p.m. Thursday, 9 a.m.
194 Fernbank Street ...	Monday, 1.30 p.m. Tuesday, 9 a.m. Thursday, 9 a.m.	Monday, 9 a.m. Wednesday, 1.30 p.m.
101 Denmark Street ...	Monday, 1.30 p.m. Tuesday, 1.30 p.m. Friday, 1.30 p.m.	Thursday, 1.30 p.m. Friday, 9 a.m.
614 Dobbie's Loan ...	Tuesday, 9 a.m. Wednesday, 9 a.m. Thursday, 9 a.m. Thursday, 1.30 p.m. Friday, 1.30 p.m.	Monday, 1.30 p.m. Tuesday, 1.30 p.m. Friday, 9 a.m.
60 Avenuepark Street ...	Monday, 1.30 p.m. Wednesday, 9 a.m. Friday, 9 a.m.	Tuesday, 9 a.m. Thursday, 1.30 p.m.

WELFARE CENTRES FOR EXPECTANT AND NURSING MOTHERS AND CHILDREN UNDER FIVE YEARS OF AGE.

Address of Centre.	Clinics for Children and Nursing Mothers.	Clinics for Expectant Mothers.
106 Orr Street		Monday, 1.30 p.m. Tuesday, 9 a.m. Wednesday, 9 a.m. Thursday, 1.30 p.m. Friday, 9 a.m.
10 Redan Street	Monday, 9 a.m. Tuesday, 1.30 p.m. Wednesday, 1.30 p.m. Thursday, 9 a.m. Friday, 1.30 p.m.	
150 Wellshot Road ...	Monday, 1.30 p.m. Tuesday, 9 a.m. Tuesday, 1.30 p.m. Wednesday, 9 a.m. Wednesday, 1.30 p.m. Friday, 1.30 p.m.	Monday, 9 a.m. Tuesday, 1.30 p.m. Thursday, 1.30 p.m. Friday, 9 a.m.
26 Florence Street ...	Monday, 9 a.m. Monday, 1.30 p.m. Tuesday, 9 a.m. Tuesday, 1.30 p.m. Thursday, 1.30 p.m. Friday, 9 a.m.	Monday, 9 a.m. Tuesday, 1.30 p.m. Wednesday, 1.30 p.m. Thursday, 1.30 p.m. Friday, 1.30 p.m.
Fauldhouse Street ...	Thursday, 9 a.m.	Wednesday, 9 a.m.
39 Bengal Street ...	Tuesday, 1.30 p.m. Wednesday, 1.30 p.m.	Friday, 1.30 p.m.
46 Balvicar Street ...	Monday, 9 a.m. Monday, 1.30 p.m. Thursday, 9 a.m.	Thursday, 1.30 p.m.
132 Weir Street	Tuesday, 9 a.m. Thursday, 9 a.m. Thursday, 1.30 p.m.	
2 Summertown Road ...	Tuesday, 9 a.m. Wednesday, 1.30 p.m. Friday, 9 a.m.	Monday, 9 a.m. Thursday, 9 a.m. Thursday, 1.30 p.m.
20 Arklet Road	Monday, 1.30 p.m. Wednesday, 1.30 p.m. Thursday, 1.30 p.m. Friday, 1.30 p.m.	Monday, 9 a.m. Tuesday, 9 a.m. Tuesday, 1.30 p.m.
Craigmuir Road	Wednesday, 1.30 p.m. Thursday, 9 a.m. Friday, 1.30 p.m.	Monday, 1.30 p.m. Wednesday, 9 a.m.
Maternity Hospital,	Monday,* 9 a.m. Wednesday,*9 a.m. Friday,* 9 a.m.	Monday, 1.30 p.m. Tuesday, 1.30 p.m. Wednesday, 1.30 p.m. Thursday, 1.30 p.m. Friday, 1.30 p.m. Saturday, 9.30 a.m.

* Clinics for Infants under One year of age.

Although the number of infant consultations held during 1949 was increased to 3,400 sessions compared with 3,389 for the preceding year, the total number of attendances at these consultations was again

reduced because of the lower birth-rate ; but some part of the reduction was probably also due to the fact that mothers who would, prior to the coming onto operation of the National Health Service, have attended the clinics, now prefer to consult their own State doctor. The decrease from this latter cause is not significant and became less marked towards the end of the year.

The total number of primary attendances of all infants was 10,037 and subsequent attendances 110,434 compared with the corresponding figures of 11,204 and 134,043 in 1948. Primary attendances of children under one year of age were also lower, 9,120 against 10,221 in 1948, while subsequent attendances, 85,536 were fewer by 19,588, reductions of 10·7 and 18·6 per cent. respectively.

The following table gives the attendances at each consultation centre during 1949, with the corresponding total figures for the previous year:—

ATTENDANCES AT INFANT CONSULTATIONS, 1949.

	No. of Consultations held.	Children—1 year. No. of Attendances.		Children+1 year. No. of Attendances.		Total No. of Attendances.		1948—Total No. of Attendances	
		Prim.	Sub.	Prim.	Sub.	Prim.	Sub.	Prim.	Sub
Central—									
Cochrane Street	52	69	564	19	275	88	839	121	99
Richard Street	202	438	3,592	207	1,346	645	4,938	524	5,68
Partick ...	150	401	3,420	29	945	430	4,365	478	5,49
Blawarthill ...	144	461	3,263	46	792	507	4,055	667	5,57
Royal Hospital for Sick Children	102	116	1,439	9	373	125	1,812	158	2,41
Netherton ...	12	52	257	20	114	72	371	—	—
North—									
Provan ...	252	585	4,213	69	1,096	654	5,309	740	6,89
Springburn ...	150	384	4,007	17	842	401	4,849	447	6,49
Denmark Street	148	407	4,455	24	749	431	5,204	416	5,48
Cowcaddens ...	258	482	5,183	48	2,466	530	7,649	609	8,77
Maryhill ...	150	479	4,033	48	1,174	527	5,207	569	6,28
East—									
Redan Street	252	1,181	9,027	88	2,214	1,269	11,241	1,500	14,10
Shettleston ...	304	872	9,137	54	3,369	926	12,506	1,085	15,76
South-East—									
Gorbals ...	300	890	8,049	101	2,080	991	10,129	1,180	13,31
Pollokshaws ...	104	334	3,097	22	695	356	3,792	290	3,43
Balvicar Street	102	260	3,702	17	755	277	4,457	293	4,28
Oatlands ...	52	221	2,036	5	450	226	2,486	173	1,98
South-West—									
Weir Street ...	156	303	2,983	24	914	327	3,897	360	5,55
Govan ...	156	356	3,377	42	1,261	398	4,638	535	5,98
Elder Park ...	200	590	6,379	15	2,067	605	8,446	711	10,74
Penilee ...	154	239	3,323	13	921	252	4,244	348	4,85
	3,400	9,120	85,536	917	24,898	10,037	110,434	11,204	134,04

Infant consultations are also held in the Maternity Hospital and in 1949 there were 2,712 attendances compared with 3,586 in 1948.

" Health of Mother and Child."—This booklet continued in demand at the centres and 6,342 copies were sold during the year. Large numbers continued to be supplied to other Local Authorities in Scotland and in England. Translations of the booklet have been made and it is extensively used in Egypt and Poland. Requests for copies have also been received from several places abroad, *e.g.*, Tanganyika and West Africa.

Ante-Natal Consultations.—Sessions at ante-natal clinics numbered 2,265 compared with 2,198 for the preceding year. The total attendances were 64,703, compared with 79,278 in 1948 ; primary attendances were 8,572, or 2,122 less than the previous year (1948) ; subsequent attendances numbered 56,131, a decrease of 12,453. Consultations and attendances at each of the Centres are shown in the following table :—

ATTENDANCES AT ANTE-NATAL CLINICS, 1949.

	No. of Clinical Sessions.	Number of Attendances.		
		Primary.	Subsequent.	Total.
Richard Street ...	99	430	2,359	2,789
Partick	98	347	2,336	2,683
Blawarthill ...	90	374	2,563	2,937
Netherton	12	34	265	299
Provan	250	470	3,845	4,315
Springburn ...	98	343	2,152	2,495
Denmark Street ...	104	332	2,074	2,406
Cowcaddens ...	150	390	2,791	3,181
Maryhill	104	422	2,938	3,360
Orr Street ...	254	1,241	9,256	10,497
Shettleston ...	202	983	6,125	7,108
Gorbals	252	1,055	6,288	7,343
Oatlands	52	164	1,096	1,260
Pollokshaws ...	50	255	1,288	1,543
Balvicar Street ...	52	84	712	796
Govan	150	775	4,366	5,141
Elderpark	150	684	4,210	4,894
Penilee	98	189	1,467	1,656
	2,265	8,572	56,131	64,703

The total number of cases attending the ante-natal dispensary of the Maternity Hospital for the first time was 3,286, compared with 3,421 in 1948, and the total attendance, 19,143 as against 19,563. Of the 2,471 cases treated to a termination in delivery, 338 were treated in their own homes. Cases treated in the ante-natal wards numbered 1,457.

In addition to the above, ante-natal consultations were carried on at the four municipal hospital out-patients departments, namely, Stobhill Hospital, Southern General Hospital, Eastern District Hospital, and Western District Hospital. The new cases registered at these consultations during 1949 numbered 3,372, and they made 13,535 attendances. The corresponding figures were 1,994 and 7,064 in 1948 respectively.

Comment on the decrease in the numbers of mothers attending the Local Health Authority ante-natal clinics is made in the introduction to this section.

MATERNAL DEATHS.

In attendance at the ante-natal clinics were 9,002 patients whose pregnancy (excluding abortions) terminated in 1949. Among these, 11 deaths occurred, giving a death rate of 1·2 per thousand births compared with 1·6 in 1948. There were no deaths from puerperal septicaemia. Causes of death among these 11 women were as follows :—

Haemorrhage of Pregnancy	1
Haemorrhage of Childbirth and Puerperium	1
Other Accidents of Childbirth	2
Puerperal Toxaemia	3
Pulmonary Tuberculosis	2
All Other Causes	2
	11

Excluding the four deaths which had little association with the puerperal state, the maternal death rate of mothers attending the clinics was 0·77 compared with 1·58 for the *city* as a whole.

The following table, based on figures supplied by the Registrar General, compares the rates from each cause for the *whole city* with those of previous years.

STATEMENT SHOWING MATERNAL DEATHS AND RATES PER 1,000 BIRTHS IN GLASGOW AND SCOTLAND IN THE YEARS 1945-1949.

	Deaths.					Rate per 1,000 (live and still) Births.				
	1945.	1946.	1947.	1948.	1949.	1945.	1946.	1947.	1948.	1949
Accidents of Pregnancy ...	6	15	18	21	11	0·28	0·61	0·67	0·91	0·5
Puerperal Haemorrhage ...	11	21	21	6	6	0·52	0·86	0·79	0·26	0·2
Puerperal Septicaemia, including Post-abortive Sepsis	24	15	9	4	6	1·14	0·61	0·34	0·17	0·2
Toxaemia of Pregnancy, Albuminuria Convulsions	14	12	12	2	7	0·67	0·49	0·45	0·09	0·3
Other Puerperal Diseases ...	18	6	2	3	4	0·86	0·25	0·07	0·13	0·1
Totals— Glasgow ...	73	69	62	36	34	3·47	2·82	2·32	1·56	1·5
Scotland ...	249	237	235	160	124	2·8	2·2	2·0	1·5	1·

Dental Treatment of Expectant Mothers.—The scheme approved by the Corporation in 1935 to provide dental treatment for necessitous and partly necessitous mothers was continued until 5th July, 1948. After this date under the National Health Service (Scotland) Act, 1947, treatment was provided on application, free of cost, irrespective of income.

Attendances totalled 4,706, of which 871 were first attendances. Extractions numbered 5,276 and 920 dentures were completed. Scalings, fillings, dressings and other work necessitated 1,373 attendances of patients.

ULTRA-VIOLET RAY CLINICS.

No alteration has taken place in the arrangements for light treatment of children suffering from rickets, malnutrition, etc.

The installation and the results of treatment have been fully dealt with in previous reports, so that only the records of numbers treated are here given in respect of 1949 :—

RECORD OF ATTENDANCES AND CONSULTATIONS DURING 1949.

	Number of Clinics held.	Children −1 year. Number of Attendances.		Children +1 year. Number of Attendances.		Mothers. Number of Attendances.		Total. Number of Attendances.	
		Prim.	Sub.	Prim.	Sub.	Prim.	Sub.	Prim.	Sub.
Provan ...	98	11	127	173	4,398	4	20	188	4,545
Govan ...	148	40	300	229	6,207	4	62	273	6,569
	246	51	427	402	10,605	8	82	461	11,114

HEALTH VISITORS' TRAINING COURSE, 1949-50.

A Training Course for Health Visitors is carried out by the Health and Welfare Department in co-operation with the University of Glasgow. The response to the advertisement was most satisfactory and 49 students were chosen for the course, 35 assisted and 14 non-assisted. The assisted students on the completion of the course entered into one year's contract service at the minimum salary of a health visitor.

HEALTH VISITING SERVICE.

The number of health visitors on the staff at the end of the year, including administrative staff, was 83. During the year 8 health visitors left the staff. This number is not yet sufficient to overtake really satisfactorily the home visitation of children under five. It is hoped that the salary position with regard to health visitors will be improved in the near future so that recruitment to the staff will be more satisfactory.

INFANT VISITATION.

Under the scheme of infant visitation every birth is visited, and the following table shows the record of those visited, together with certain information obtained :—

	1947.	1948.	1949.
Inquiry Cards returned	21,413	18,695	20,993
Full information obtained ...	21,055	18,373	20,414
Others	358	322	579
Inquiry Cards issued	21,196	18,474	21,159

VISITATION BY NURSES.

Altogether the health visitors made 232,169 home visits during the year, compared with 228,280 during the preceding year. Of these totals the respective numbers for infants under one year of age were 95,435 and 89,756. First visits numbered 20,393. In addition 66,768 visits were made to houses in respect of toddlers, while 13,773 other toddlers were seen during the course of routine visitation of infants. Other visits were made for special enquiries, etc., as shown in the following table :—

Visits Made by Nurses.

	1948.		1949.	
Infants under one year—Primary visits ...	18,058		20,393	
Infants under one year—Subsequent visits ...	71,698		73,042	
		89,756		95,435
Children one to five years		66,622		66,768
Children seen while visiting infants		12,927		13,773
Ophthalmia Neonatorum		2,059		958
Puerperal Fever		513		456
Maternal Deaths Enquiries		70		54
Infant Deaths		470		390
Ante-natal Visits		5,543		4,179
Venereal Diseases		140		176
Light Treatment		754		911
Pneumonia		13		2
Other Visits		1,069		740
Houses Shut		34,518		34,586
Final Visits		13,826		13,741
		228,280		232,169

NURSING HOMES REGISTRATION (SCOTLAND) ACT, 1938.

Five applications for registration of nursing homes were made during the year. Two of these were granted and the remaining three cases were still under consideration at the end of the year. Three of the applications were in respect of new homes, one was on account of a change of management and in the remaining case the premises had previously been registered and given up and were again being occupied as a nursing home. In addition, one of the two applications which had been made in the previous year and which were under consideration at the beginning of 1949, was also granted. Thus at the end of the year one application made during 1948 and three made during 1949 were still under consideration.

Three certificates were withdrawn. One of these was in respect of a home in which there had been a change of management and in two cases the homes were given up.

The position of nursing homes as at 31st December, 1949, was as follows :—

Registered	36
Exempted	5
Total	41

HOME NURSING SERVICE.

On 31st December, 1949, the nursing staff numbered 114. This was an increase of nearly 20 over the number for 1948. In this figure are included the Superintendent and four Assistant Superintendents. The majority of the nurses are housed in the eight Homes, but 19 live at home. Three male nurses were recruited to the staff during the year.

Difficulty is experienced by certain of the Maternity Hospitals in the Western Regional Area in securing sufficient domiciliary confinements for pupil midwives in training. The Western Regional Hospital Board asked the co-operation of the Nursing Association, and during 1949 nine pupils were seconded to the Central Home from a hospital in Dumfries and certain of the pupils from the Maternity Hospital, Glasgow, also secured their domiciliary training from the Association.

Record of Work for Year Ended 31st December, 1949

Cases on Books at 1st January, 1949	1,368
Number of New Cases added	10,106
Number of Cases dismissed	9,913
Number of Cases remaining at 31/12/49	1,561
Analysis of Cases—	
Medical	6,128
Surgical	1,568
Gynaecological	179
Maternity	2,231
Dismissed—	
Convalescent	7,013
Hospital	998
Died	1,669
Removed	233
Total Number of Hours on Duty	199,102
Total Number If Visits Paid	267,450
Number of Supervisory Visits paid with Candidates by Administrative Staff	908

NURSES AGENCIES (SCOTLAND) REGULATIONS, 1945.

Two of the nine agencies registered in 1948 did not renew their licence in 1949, and no new applications were received during the year. The number on the register at the end of 1949 was therefore seven.

DAY NURSERIES.

There are 15 day nurseries in operation and one 24-hour Nursery. The latter caters for children of mothers whose hours of work do not coincide with Day Nursery hours. The children are resident from Monday to Saturday midday each week and go home for the week-ends. At all the Nurseries there was a pressure on the accommodation, which is for 724 children.

The following statement gives the statistics in respect of the work of the Nurseries during the year :—

Nursery.	Days Open.	Attendances during Year.	Average Daily Attendance.	Maximum in One Day.	Number of Places provided at end of Year. 0-2 yrs.	2-5 yrs.	Places taken at end of Year.
Central—							
Gt. Western Road	289	8,883	31	37	15	25	35
Sandyford Place	244	9,933	40	52	20	30	50
North—							
Cowcaddens ...	246	9,137	37	45	18	27	45
Hamiltonhill ...	339	8,982	39	48	13	30	50
Broompark Circus	243	10,244	41	54	25	30	55
East—							
Bridgeton ...	243	9,871	40	50	22	28	45
Crail Street ...	243	9,516	40	48	18	32	50
Onslow Drive ...	254	10,372	45	51	20	40	57
Quarrybrae ...	243	3,866	15	19	17	3	20
Westercraigs ...	243	8,556	35	43	13	30	46
South-East—							
Bedford Street	244	6,356	26	38	10	35	38
Holmlea Road	243	10,214	42	55	20	30	55
Pollokshaws ...	244	7,597	31	37	10	30	41
South-West—							
Kingston ...	241	7,617	32	40	7	33	40
Clutha Street ...	243	9,417	39	47	20	30	52
Elderpark ...	243	8,184	33	47	15	25	39

RESIDENTIAL NURSERIES.

In September, 1949, Castlebank House was derequisitioned and returned to the owners. Scotstoun House and the two Short-stay Residential Homes were in continuous use during the year. All these residential institutions find great difficulty in acquiring the necessary number of staff. The main reason is that the remuneration is the same as for Day Nursery staffs in spite of increased responsibility and longer hours of duty, and in both institutions is very much less than that paid to nurses in the Hospital Service. Repeated advertisement for staff brought little response.

	Type of Accommodation.	Total Admissions during Year.	Number of beds provided at end of Year. 0-2 Years.	2-5 Years.	Others.
9 Winton Drive ...	Short Stay.	363	16	17	—
Glenrosa, 47 Maxwell Drive.	Do.	394	11	24	—
Scotstoun House ...	Children's Home.	165	—	40	—
Castlebank House ...	Convalescent Home.	71	35	—	—

TRAINING OF NURSERY STUDENTS.

Nursery students from Day Nurseries under the Health and Welfare Committee and from Nursery Schools under the Education Committee are trained for the examination for the Nursery Nurses' Certificate. The Training Course is one of two years' duration. During this time the students attend Langside College on two days a week for vocational training and for further education. During 1949 approximately 50 students were in training.

NURSERIES AND CHILD MINDERS.

The Nurseries and Child Minders Regulation Act, which came into operation in August, 1948, provides for the regulation of certain nurseries and of persons who, for reward, receive children into their homes to look after them.

The following Private Nurseries, Nursery Classes and Play Centres were registered in 1948 and are still in operation :—

29 Oakfield Avenue, W.2
10 Comrie Street, E.2
28 Hamilton Park Avenue, W.2
Stobcross House, 189 Stobcross Street, C.3

The Nursery at 329 Sauchiehall Street was closed towards the end of 1949 and is to re-open in more suitable premises at Belgrave Terrace next year. A Toddler's Play Centre was opened in February, 1949, at 68 Overnewton Street.

DOMESTIC HELPS.

One of the outstanding features in the work of the Department has been the expansion of the Domestic Help Service By the end of the year, approximately 1,000 helps were in employment A certain proportion of the helps deal with maternity cases but the majority are employed looking after the homes of the elderly and infirm who are temporarily or permanently incapacited. Although the number of applications for maternity helps increased from 2,585 in 1948 to 2,834 in 1949, a far greater number of mothers should be taking advantage of the scheme. It is evident that the maternity allowance of £1 per week payable for four weeks after confinement—an allowance which is granted mainly for the purpose of helping with the payment of a domestic help—is not being used for this purpose. Increased publicity and propaganda are necessary. Of the maternity applications, 2,158 were completed, 403 were cancelled, and 273 were carried forward

for completion in 1950. There were 30,816½ working days. In the general scheme, the applications numbered 2,846 against 2,181 during the preceding year. Of these, 333 were cancelled, leaving 2,531 cases to be dealt with compared with 1,933 during 1948. There were 67,293½ working days against 47,193½ working days during the previous year.

The following table shows the illness or other conditions under which applications for Home Helps under the general scheme were made :—

Diseases.	General and "E" Schemes			
	−40 yrs.	40-60 yrs.	+60 yrs.	Totals.
Influenza	7	42	57	106
Cancer	4	18	38	60
Diabetes	1	5	28	34
Intra Cranial Vascular Lesion ...	—	27	239	266
Heart Disease	30	113	367	510
Circulatory	14	89	279	382
Bronchitis	7	31	114	152
Pneumonia	5	15	31	51
Pleurisy	6	6	11	23
Respiratory	2	7	57	66
Digestive	4	25	56	85
Kidney Disease	4	11	7	32
Nervous Diseases	11	37	54	102
Debility following illness	8	16	115	139
Debility following operation	29	103	102	234
Accident	5	34	142	181
Rheumatism	7	49	142	198
Puerperal Fever and Pyrexia	—	—	—	—
Phlegmasia Alba Dolens	—	—	—	—
All other causes	24	59	104	187
Totals	168	687	1,953	2,808

MIDWIVES (SCOTLAND) ACTS.

During 1949 there was a decrease of 8 in the number of midwives who notified their intention to practise, so that there are now 154 on the register. The number of those entitled to registration by examination is 149, while the number of those registered as having been in practice in 1914 is now 3. There are also 2 with other recognised qualifications. The number who notified their intention to practise for the first time was 25.

On 31st December, 1949, there were 93 domiciliary midwives in full-time employment of the Corporation and 20 Queen's nurses engaged full-time in midwifery. The Corporation midwives paid 27,435 antenatal visits to their patients. 75,962 visits were also carried out during the puerperium. The Queen's nurses paid 49,392 visits. In addition the domiciliary midwives are responsible for the domiciliary training of

the pupil midwives from the various ex-Corporation Hospital Maternity Units and a certain number of pupil midwives from the Glasgow Royal Maternity and Women's Hospital. During the year 165 pupil midwives were so trained. The scheme provides that there is always a domiciliary midwife and/or one of the non-medical supervisors with the pupil midwife at each confinement. For this training 29 of the midwives are required.

The following table shows the record of work :—

(i) Total number of births *occurring in the area* during year—that is before correction for mother's residence :—
Live Births 20,932 Still Births 633 Total 21,565

(ii) Total number of births in (i) occurring in institutions (including private maternity homes) 12,810.

(iii) Total number of births in (i) occurring at home 8,755.

(iv) Number of births in (iii) classified to show nature of attendance at birth :—

	Cases dealt with under Section 23 (2) of the National Health Service (Scotland) Act, 1947.			Other domiciliary cases.			
	Doctor engaged and present at confinement.	Doctor engaged and not present at confinement.	Midwife alone (no doctor engaged).	Doctor engaged.	Midwife alone (no doctor engaged).	Without doctor or midwife.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(*a*) Midwives employed by the Authority (including those engaged on a fee-per-case basis)	1,980	656	1,996	290	—	—	4,922
(*b*) Midwives employed by voluntary organisations	1,769	462	Nil	—	—	—	2,231
(*c*) Midwives employed by Hospital Boards of Management	—	—	1,550	—	—	—	1,550
(*d*) Private practising midwives	—	—	—	14	26	—	40
(*e*) Totals	3,749	1,118	3,546	304	26	—	8,743

Note—Emergency cases under Section 22 (1) of the Midwives (Scotland) Act, 1915, should *not* be included in the cases in which a doctor has been "engaged."

(v) *Medical Aid under section* 22 (1) *of the Midwives (Scotland) Act*, 1915. Number of cases in which medical aid was summoned during the year under Section 22 (1) of the Midwives (Scotland) Act, 1915, by a Midwife :—

For Domiciliary Cases :—
(i) Where the Medical Practitioner had arranged to provide maternity medical services under the National Health Service—Number 2,057
(ii) Others—Number 732
} Total 2,789

Fees to doctors attending emergency cases amounted to £1,293 7s., and during the year £98 6s. 3d. was recovered and £2 9s. 6d. withdrawn from medical practitioners' accounts.

CASES OF PUERPERAL FEVER OCCURRING IN THE PRACTICE OF MIDWIVES.

Year	Midwives	Cases Notified
1939	45	62
1940	42	61
1941	31	41
1942	24	31
1943	29	39
1944	31	39
1945	31	38
1946	28	42
1947	42	63
1948	27	33
1949	14	14

MATERNITY BUNDLES.

Bundles to the number of 976 were supplied, in respect of which part payment received amounted to £13 6s. 4d.

OPHTHALMIA NEONATORUM.

There has been a remarkable drop in the number of cases notified as ophthalmia neonatorum during 1949. Only 132 cases were notified compared with 263 in 1948, 305 in 1947 and 340 in 1946.

An analysis of all notified cases was made with the undernoted result :—

Ophthalmia Neonatorum	61
Purulent Conjunctivitis	44
Simple Conjunctivitis	19
No Abnormality Detected	8
	132

All cases notified according to nature of attendance at birth :—

Doctors	34
Institutions	41
Institution Nurses	20
Midwives	37
	132

All cases classified according to age at onset :—

−12 hours	9
− 4 days	25
− 8 days	30
+ 8 days	60
No Abnormality Detected	8
	132

Bacteriological examination was made in all cases with the following result :—

Gram Positive Diplococci	24
Staphylococci	4
Diphtheroids	32
Koch Weeks	7
Streptococci	2
Morax Axenfeld	1
Gonococci	1
No Organisms Found	44
No Material	17
	132

It will be noted that there was only one case due to gonococcal infection compared with 8 in 1948, 9 in 1947, and 16 in 1946.

Seventeen cases were admitted to Baird Street Hospital for treatment and other 25 attended as out-patients and made 210 visits. The remaining cases were treated by health visitors who made 958 visits in all.

In addition, eight cases were admitted to Baird Street Hospital from other authorities, one of which was positive for gonococcus. In no case was there any impairment of vision.

The Wasserman test for syphilis was done in all hospital cases and all gave a negative result.

PUERPERAL FEVER AND PUERPERAL PYREXIA.

During the year there were registered 192 cases of puerperal fever and 114 cases of puerperal pyrexia compared with 250 and 122 respectively for the preceding year. All but 2 cases of puerperal fever and all but 19 pyrexias were removed to hospital or other institution.

Deaths associated with cases of puerperal fever *notified* during the year numbered 5. This is equal to a fatality rate of 2·6 per cent. compared with 2·8 for the preceding year.

Among the cases registered as puerperal pyrexia there were 11 deaths which under the International Classification of Deaths would be tabulated as follows : pulmonary tuberculosis, 3 ; heart disease, 2 ; pneumonia, 1 ; puerperal sepsis, 2 ; other maternal causes, 3. Excluding 6 deaths which had little association with the puerperal state, the combined mortality rate on the 10 deaths from puerperal conditions is, therefore, 2·7 per cent., the same as the low rate for the previous year.

SECTION IV.

INFECTIOUS DISEASES.

Section II on Vital Statistics illustrates the extent to which the mortality from infectious diseases has been reduced during the past twenty years. This fact, along with the ageing population, has caused much more interest to be taken in the diseases of adult life. Despite their lower mortality, infectious diseases continue their seasonal and periodic prevalence in considerable numbers, and although the death rate has been so much reduced preventive measures still require to be constantly maintained.

During 1949 the total number of cases of infectious diseases registered was 24,598, compared with 31,549 during the preceding year and 31,355 in 1947, which was the lowest hitherto recorded. In addition, there were 3,181 cases removed to hospital and ultimately diagnosed as non-infectious, compared with 3,023 for the previous year.

Although the death rates from infectious diseases are low, their occurrence creates difficulties during the winter months when the maximum incidence of several infectious diseases frequently coincides. During 1949 the number of cases removed to hospital was 12,161 (10,948 to fever hospitals and 1,213 to other institutions, mostly general hospitals). Cases of respiratory disease, including influenza, totalled 4,574, of which 2,238 were removed to fever hospitals and 1,142 to general hospitals. During the year 2,331 cases of scarlet fever were notified, of which 1,759 were treated in fever hospitals. An increasing number of cases of dysentery among young children are now being admitted to hospital, and in 1949 the number so treated was 1,401. Details of notifiable and non-notifiable diseases are given in Appendix Table XV, while Appendix Table XVI illustrates their seasonal prevalence.

Vaccination.

With the coming into operation of the National Health Service (Scotland) Act, on 5th July, 1948, compulsory vaccination or declaration of conscientious objection ceased. Provision, however, was made for the notification of vaccination by medical practitioners, and in 1949 notifications were received of 6,327 primary vaccinations and 964 re-vaccinations.

Vaccinations done at Child Welfare Clinics during the year numbered 2,644, a figure which is little more than half the number inoculated at these centres in previous years. The total primary vaccinations would appear to be 8,971, or 42·9 per cent. of the total births during the year. This percentage compares with 56·7 in 1947, the last complete year of compulsory vaccination, when in addition 3·4 per cent. were certified as insusceptible, making a total of 60 per cent.

This fall in the proportion of children so protected is only a first indication of the laxity that is likely to develop within a few years as parents become more complacent with regard to the advisability of having their children vaccinated against smallpox. The danger of a serious outbreak of smallpox will always be present, and in increasing degree as air travel becomes more frequent.

ENTERIC FEVER AND DYSENTERY.

Typhoid.—Typhoid reached its lowest recorded level in 1949 when only two cases were registered. One was a boy aged one year who sickened in September ; the other was an imported case, a man aged 55 who arrived in the harbour in October suffering from the disease. Despite these low figures, it cannot be assumed that the City will, during the next few years become free from this infection, for apart from the possibility of imported cases, there remains a reservoir of infection in the City as a result of the many cases of typhoid which have occurred in the past generation.

Paratyphoid.—There were only eight registered cases. Four of these were institutional, namely a nurse infected in a fever hospital, two females infected in two different general hospitals and a female admitted to a general hospital with paratyphoid contracted in Ayrshire. The four home cases consisted of a mother in the Eastern Division, together with her son and daughter, and a man from the South-Western Division. All except the case last mentioned sickened in the third quarter of the year. The same comments as have been made above regarding the uncertainty of the future course of typhoid in Glasgow apply also to paratyphoid. The future course of paratyphoid is particularly uncertain because from time to time Glasgow and vicinity have been the scene of large outbreaks of paratyphoid arising from untraceable sources.

Bacillary Dysentery.—Cases of this disease totalled 1,401—an annual number greater than that of the preceding year. The numbers of home and institutional cases and their seasonal distribution were as follows :—

SEASONAL DISTRIBUTION.

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
Home Infections	122	251	445	427	1,245
Institutional	18	24	64	50	156

It will be noted that the high incidence was still prevalent at the end of the year. The institutional cases form a lower percentage of the total cases than usual. Although these institutional cases came from as many as 24 different institutions, Stobhill General Hospital contributed 42 cases. Most of the infection was of the Sonne type, although there were also several Flexner cases. A residential institution for infants provided 40 cases of Sonne infection between June and September. The age distribution of the year's cases was as follows :—

	−1 Year.	−5 Years.	−15 Years.	−55 Years.	55+ Years.	Total.
Home Infections	66	647	278	213	41	1,245
Institutional	11	99	13	31	2	156

It is seen that the main incidence of these infections continues to fall on children aged between 1 and 4 years.

SCARLET FEVER.

In 1949 there were 2,331 cases registered compared with 3,908 during the preceding year. This is the lowest on record apart from the two war years, 1940-1941, when a large proportion of the child population was evacuated from the City. The total number treated in hospital was 1,759, while 572 were nursed at home. In 1948 the number isolated at home was 1,332. When scarlet fever was more virulent in the early years of this century, all but ten per cent. were removed to hospital in order to prevent the infection of others ; but now many cases are left at home because this disease has assumed a very mild character. The mortality in recent years has been practically nil and sequelae, such as nephritis, markedly reduced.

The disease chiefly affects children between 5 and 10 years, in over 40 per cent. of all notifications coming from this group. The seasonal prevalence is given in Appendix Table XVI. The heaviest incidence of the disease was recorded in Ruchill Ward with 159 cases, followed by Dalmarnock with 106, and Cowcaddens with 105, all districts with a large child population.

The low fatality of recent years has been maintained. Only three deaths are recorded, the same as for 1948.

ERYSIPELAS.

There has also been a considerable decrease in the number of cases of erysipelas, 306 (141 males and 165 females) against 480 in 1948. This is the lowest on record and the incidence is less than a third of what it was prior to the war. The disease chiefly affects persons over 35. This lower incidence is probably not unconnected with the reduction in the prevalence of scarlet fever. As in the case of scarlet fever the mortality has almost disappeared, the number of deaths being only a fraction of those occurring as recently as 1929-1931.

DEATHS.

1929	...	...	52	1947	...	...	4
1930	...	...	63	1948	...	...	5
1931	...	...	55	1949	...	...	2

PUERPERAL FEVER AND PYREXIA.

These conditions have been dealt with in the previous section on Child Welfare, in which reference is made to the general decline which has taken place in these diseases along with other streptococcal infections during recent years. The number of cases of puerperal fever, 192, and puerperal pyrexia, 114, is the lowest recorded during the past thirty years, and is less than half the number occurring in 1939. The reduction is not explained by the birth rate alone, which is now more or less the same as the rates in 1939 and previous years.

The mortality is now only a fraction of that prevailing in past years. This year only six deaths were recorded from this cause, equal to a death rate of five per million of the population, compared with an annual average of 47 per million for the period 1936-1938.

DIPHTHERIA.

Progress towards reduction of diphtheria, both in its incidence and mortality, has continued. The number of verified cases of diphtheria and membranous croup registered during the year was 154 compared with 286 for the previous year, and is now barely 3 per cent. of the total for 1940 when the diphtheria immunisation campaign began. The greatly lowered incidence must be attributed to the large number of children protected by immunisation in the past few years and to the cumulative effect of the continuous campaign against diphtheria. The proportion of cases occurring in the young age groups differs little from previous years.

The following table illustrates that the mortality principally affects children under 5 years of age.

Year.	Cases.	Deaths		
		—5 Years.	+5 Years.	Total.
1940	5,190	130	90	220
1941	4,039	88	67	155
1942	3,325	54	36	90
1943	2,919	48	33	81
1944	2,377	45	17	62
1945	1,970	25	8	33
1946	1,458	25	12	37
1947	502	11	2	13
1948	286	7	1	8
1949	148	1	4	5

The seasonal incidence of the disease is given in Appendix Table XVI which shows that despite the small numbers occurring monthly, the tendency towards higher rates during the cold months of the year is still evident. The heaviest incidence of the disease occurred on the south side of the river, i.e., Hutchesontown, Gorbals, and Govan wards.

Diphtheria Immunisation Facilities.

The facilities for diphtheria immunisation are as follows :—

(1) Thirteen Diphtheria Immunisation Clinics are held each week in different areas of the City. These deal with children of all ages.

(2) Immunisation is carried out at all Child Welfare Centres.

(3) School entrants are offered facilities at their first medical examination.

(4) Children in Day Nurseries and Nursery Schools are immunised on admission.

(5) Medical practitioners are provided with the diphtheria prophylactics free of charge.

The following table shows the progress of the campaign during the past four years.

	No. of Children Immunised.			No. of Reinforcing Doses.		
	−5 years.	+5 years.	Total.	−5 years.	+5 years.	Total.
1946	8,745	3,734	12,479	61	1,723	1,784
1947	10,560	10,143	20,703	32	4,809	4,841
1948	12,701	9,819	22,536*	691	6,959	7,657*
1949	11,403	6,106	17,509†	65	24,283	24,348

* Age not stated—16. * Age not stated—7.

† Age not stated—14.

The 6,106 children over five years immunised during 1949 form only 30 per cent. of the number of children entering school at five years of age, which suggests that most of the other children had been inoculated at younger ages, since the number of re-inforcing doses given to children of these ages increased from 6,959 in 1948 to 24,283 in 1949.

The number of children under five years of age immunised for the first time is 11,403, which is a little lower than for the preceding year. This reduction is due partly to the lower birth rate and partly to the fact that the numbers now attending Child Welfare Clinics, where most of the inoculations are done, are fewer following the introduction of the National Health Service. From reports received it is estimated that between 3,000 and 4,000 children are inoculated annually by private doctors. The fact that the number of children under five years inoculated is more than 50 per cent. of the annual number of births indicates that the birthday letters, sent to parents of children who have reached their first birthday, are not without effect. A similar letter is sent to parents of toddlers known to health visitors to be still unprotected.

	Letters Sent.			Number immunised under 5 years of age.
	Infants.	Toddlers.	Total.	
1946	5,686	5,814	11,500	8,745
1947	6,846	8,210	15,056	10,560
1948	7,490	8,972	16,462	12,701
1949	6,204	10,030	16,234	11,403

DISEASES OF CENTRAL NERVOUS SYSTEM.

Cerebro-Spinal Fever.—After the high prevalence of the disease throughout the war years cerebro-spinal fever has settled down at a slightly higher level than in the immediate pre-war years. In 1949 there were 101 cases compared with 97 during the previous year. The highest number of cases was nine in Govan Ward, while there were eight cases in Mile-End and seven in Ruchill Wards, districts which are widely separated. The infection is always more evident during winter months, and the greatest number of cases in any one month was 17 in December. The seasonal prevalence was as follows :—

	Cases Registered. 1949.	1948.
1st Quarter	36	32
2nd Quarter	16	19
3rd Quarter	15	19
4th Quarter	34	27
	101	97

Cases were more numerous among females, especially between five and fifteen years, which is unusual. Mortality per cent. was lower in females than males (5·2 against 13·6). The total number of deaths was nine, the lowest for a decade and compares favourably with 15 deaths for 1948.

POLIOMYELITIS AND POLIO-ENCEPHALITIS.

There were four notifications of polio-encephalitis and 53 of poliomyelitis during the year, the majority being received during August and September. The final returns show that only two cases of polio-encephalitis and 26 cases of poliomyelitis were confirmed. One of the polio-encephalitic cases was very mild and had no paralysis. Only one death occurred among the 28 cases.

The following tables show (*a*) the distribution of the cases according to their sickening dates, and (*b*) their distribution according to the Divisions of the City :—

(*a*)	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	1	—	2	2	2	—	4	6	2	3	4	2

(*b*)	North	Central	East	South-East	South-West
	8	5	6	6	3

The age and sex distribution of the cases show that over 60 per cent. were in the age group 0-5 years, and that males were more frequently affected than females.

	—1 Yr.	—2 Yrs.	—3 Yrs.	—4 Yrs.	—5 Yrs.	5-15 Yrs.	15-25 Yrs.	25+ Yrs.	All Ages
Males	2	5	3	1*	1	3	2	1	18
Females	3	1	—	2	3	—	—	1	10
Total ...	5	6	3	3	4	3	2	2	28

* Abortive.

The youngest child was a female, aged 5 months, and the two cases in the oldest age group were a male aged 32 years and a female aged 35 years.

Two cases were treated in the respirator. One died after 24 hours in the respirator. The other, a girl aged 5 years, recovered power of the respiratory muscles after 17 days in the respirator but still has severe residual paralysis of both legs and back muscles.

Mortality.—The case who died was a male child, aged 1 year and 10 months. He sickened on 25th January and was admitted to hospital on 27th January with an ascending paralysis of both legs, back muscles, arms and muscles of respiration.

No association was found amongst any of the confirmed cases, but in four instances pharyngeal infections occurred amongst other members of the patients' households. These illnesses were mild and transient and did not necessitate hospitalisation. For example, six days before sickening a girl aged 5 had attended a birthday party at which there was present a girl aged 7 who developed tonsillitis the same night; and three days after the case sickened, another child who had attended the party developed "flu" with sore throat.

Another case of epidemiological interest was a woman aged 35 who had no previous symptoms but found that after her confinement, which was perfectly normal, she was unable to move any of her limbs or to turn in bed. Following treatment in hospital she recovered the power of her limbs, but her back and abdominal muscles still remain weak.

In 27 of the 28 cases paralysis occurred involving the following sites :—

Multiple sites (arms and legs ; arms, face and back ; legs and abdomen, etc.)	12
Face and palate	1
Arm or arms	2
One leg	9
Both legs	3

The cases when reviewed in April, 1950, showed the following residual paralysis :—

Multiple (arms and legs)	1
One arm	3
One arm and one leg	2
One leg or both legs	14
Back muscles	2
No residual paralysis	4
Died	1

The extent of the residual paralysis may be classified :—

Gross	1
Severe	3
Moderate	12
Mild	6
Recovered	4
Died	1

Administration.—Adequate hospital accommodation was available for the treatment of the 28 cases notified, and all except three were admitted to fever hospitals for treatment. These three home cases were placed under the care of orthopaedic specialists. Of the 25 cases treated in the fever hospitals, one died ; three were sufficiently recovered to be allowed home in approximately four weeks' time ; twenty were transferred to Mearnskirk Hospital and one to Killearn where further orthopaedic treatment was and is, in over half the cases, still carried out.

MALARIA.

The number of cases has been decreasing gradually since the end of the war. Cases registered during the year numbered 14 compared with 28 in 1948. With the exception of one child, a boy under five years of age, all were adults. Of the total, nine were treated in fever hospitals. All were infected abroad.

MEASLES.

There was a minor prevalence of measles during the spring and early summer months when about four-fifths of the total cases occurred. Altogether 4,032 cases were recorded. The previous outbreak of the disease took place during the winter of 1947-48 when about 11,000 cases were registered. The prevalence in 1949 was largely confined to certain districts, particularly the eastern parts of the City. The seasonal prevalence is given in Appendix Table XVI. With the occurrence of favourable weather conditions the mortality was low with only two male and six female deaths, all but one occurring under the age of five years Of the total cases, 440 were removed to fever hospitals

The following table shows the contrast between the major prevalences before the war compared with the reduced incidence after the war, as well as the fatality per cent

	Cases.	Deaths.	Fatality per cent.
1936	20,196	311	1·5
1937	2,272	29	1·3
1938	15,839	257	1·6
1947	4,230	15	0·4
1948	8,132	23	0·3
1949	4,032	8	0·2

Rubella or German Measles.—271 cases, of which 57 were over 10 years of age, were registered during the year, compared with 219 for the previous year.

WHOOPING COUGH.

The prevalence of whooping cough in the closing months of 1948 continued into the first quarter of 1949. 3,947 cases were registered during the year, the large majority in the first six months.

It is likely that compulsory notification of the disease which began on 1st January, 1950, will bring to notice additional cases, more especially in households where none of the family is attending school. Previously it was through the school inspectors that most cases became known to the Department.

There was a large proportion of infants under one year in the cases recorded during 1949. Of the 21 deaths registered, 12 were males and 9 females ; all were under five years, and 71 per cent. were under one year. The fatality rate was only 0·5 per cent. compared with 1·4 per cent. in 1947 when there were 5,456 cases. The heaviest prevalence was in the east and south-east of the City.

CHICKENPOX.

Cases of chickenpox were less numerous than usual, 3,700 being registered. In the previous year the number was 6,876, a figure which is nearer the annual average. Cases are removed to hospital only in special circumstances, e.g., when occurring in institutions, children's homes, etc. During the year 104 such cases were admitted to fever hospitals.

The disease was probably much more prevalent than the bookings would seem to indicate for it is mostly on information obtained from school attendance officers that cases are registered. The incidence of the disease was more or less widespread throughout the City, but some wards were more heavily affected than others, in particular Shettleston and Tollcross (284 cases), Anderston (237), Craigton (200) and Govan (195). The seasonal incidence given in Appendix Table XVI shows that the largest number (618 cases) was recorded in December. This is exceptional for it is more usual for the maximum to occur in the spring.

DIARRHOEA AND ENTERITIS.

Apart from immaturity, deaths from diarrhoea and enteritis take the heaviest toll of infant life after pneumonia. The mortality from these digestive conditions has been markedly reduced during the past two years, and has largely contributed to the lower infant mortality rates for 1948 and 1949.

During 1949 there were only 176 deaths. Of these, 157 were in children under one year (7 per 1,000 births). Eighty per cent. of all deaths from diarrhoea and enteritis occur in infants under six months of age.

The following table shows that as usual male deaths are again almost double the number of female :—

	Males		Females		Total	—1 year
	—1 year	—2 years	—1 year	—2 years		Per thousand births.
1944	400	18	270	16	670	30
1945	225	16	138	6	363	12
1946	166	6	117	6	283	12
1947	339	5	221	9	574	22
1948	156	5	86	3	250	11
1949	100	13	57	6	176	7

It would not be justifiable at this stage to claim that any one factor has caused this satisfactory fall in the incidence. The Department has continued its health propaganda, and in addition a permanent fly control unit has been instituted in an endeavour to reduce the fly population which is an accepted danger during the summer and early autumn. In 1949 the number of deaths during this period is considerably below the monthly average, as is shown in the following table :—

NUMBER OF DEATHS UNDER 1 YEAR ACCORDING TO MONTH OF DEATH.

	1949.		1948.			1949.		1948.	
	Deaths.	Temp.	Deaths.	Temp.		Deaths.	Temp.	Deaths.	Temp.
January	18	40·0	27	36·8	July ...	11	60·9	17	59·3
February	16	41·1	22	39·4	August ...	11	59·9	28	56·7
March	9	41·1	32	44·9	September	17	57·6	15	53·9
April	10	47·4	17	46·8	October ...	19	51·0	12	48·2
May	11	51·6	31	51·5	November	20	42·7	13	43·8
June	4	58·4	10	55·1	December	11	39·5	18	40·3

PEMPHIGUS NEONATORUM.

Cases of pemphigus neonatorum were less numerous in 1949 than in previous years for only 11 were reported compared with 19 in 1948 and 41 in 1947.

RABIES.

No case of rabies is known to have occurred, but a number of instances of persons bitten by dogs were reported by the police for inquiry. In 242 cases the bites were recorded as slight and in 13 as serious, a total of 255. This compares with 469 in 1948, 307 in 1947, and 337 in 1946.

TRACHOMA.

No new cases were notified during 1949, but five cases on the 1948 register died and twelve others removed outwith the City. The number on the register at the end of the year was 106.

The clinic, at which an eye specialist attends, continues to be held on Thursdays while the nurse carries out the treatment prescribed on three other occasions during the week. Two hundred clinic sessions were held, at which these patients made 1,320 attendances. Visits made by the nurses numbered 177. Eight cases were admitted to Stobhill for treatment.

INFECTIVE JAUNDICE (LEPTOSPIROSIS).

Four cases of Leptospirosis were notified to the Department during the year, two of these being fish-workers :—

Case I.—In May a fish market porter, aged 56 years, was admitted to a City hospital seven days after sickening. Blood examination after admission revealed a positive Schuffner reaction to L. icterohaemorrhagica at a titre of 1/3,000. The patient died eleven days after admission and post mortem examination confirmed the diagnosis of Weil's Disease.

Case II.—A 25 year old porter in the fish market was admitted to hospital as a case of pneumonia some two days after sickening. His temperature remained unsettled for a week and then became normal. A specimen of blood examined three days after admission gave agglutination for L. icterohaemorrhagica at a titre of 1 in 100. Eleven days later the titre of agglutination had risen to 1 in 30,000. In this case, it is of interest to note that jaundice, vomiting and haemorrhage were absent. The patient did have a conjunctivitis and, in the absence of a history of abrasions at the time, it is possible that this may have been the root of infection. The patient made a complete recovery.

Case III.—A Lanarkshire miner, 40 years of age, was admitted to a City hospital in January suffering from jaundice of four days' duration. Symptoms of onset were nausea, repeated attacks of retching, dryness and burning sensation in the throat and a dark offensive-smelling urine. Serum agglutination tests gave a positive result of

L. icterohaemorrhagica at a titre of 1 in 10,000. The patient made a good recovery following prolonged convalescence.

Case IV.—The patient, a seafaring man, disembarked at Bristol in July and, while travelling home to Glasgow on the same day, became ill, complaining of sweating and severe rigors. Five days later he was admitted to a City fever hospital, thought to be suffering from malaria and typhoid fever. While in hospital, he became jaundiced and the diagnosis of Weil's Disease was established by the Schuffner Agglutination Test.

The source of infection in this case is somewhat dubious, though the patient avers that while living in Oporto prior to embarkation for the United Kingdom he remembered falling into sewage-contaminated water. This would give an incubation period of possibly 13 days or more, and hence it would seem more likely that the infection had been obtained on board ship.

The term "leptospirosis" is to be preferred to that of Weil's Disease for the latter in its classical form implies the presence of jaundice whereas the former merely indicates infection with the leptospira.

That leptospirosis can be occupational in origin, has been known for some time. Cases have been recorded among sewermen, miners, slaughtermen and fish-workers in various parts of the country. In each of these occupations there tends to be an ever-present rat population, the source of infection being traceable to contamination of skin abrasions or food with infected rat urine. In view of the difficulty experienced in the rat proofing of the older buildings in the City, it is perhaps not surprising to find cases of leptospirosis associated with the fish market located as it is in the nucleus of the hamlet from which the City grew. Three cases have occurred among fish workers during the period October, 1948, to September, 1949.

By means of careful history-taking and its correlation with results of serum agglutination tests, it has been possible to establish the fact that varying degrees of infection with leptospira do occur among exposed workers. In some instances minor illnesses of the influenzal type can be established as sources of immunity while in others a more severe illness associated with jaundice has established the cause of

the agglutination reaction. Thus it can be assumed that while in only three instances the source of leptospirosis has been traced to the fish market, other " missed cases " have occurred. In order to establish the true incidence of this infection and what preventive measures should be adopted, an investigation is at present being carried out into the circumstances and conditions of employment of some 200 fish-workers in the City. Various preventive measures suggested have been adopted.

SCABIES.

During 1949 the decline in the incidence of scabies continued, and this disease is not at present giving rise to any administrative difficulties. The total number of families brought to the notice of the Department during the year was 803 compared with 1,304 during 1948, and the total number of new cases treated was 857 compared with 2,116 in 1948.

These families and cases had the following distribution throughout the City :—

Division.	No. of Infected Families.	No. of Cases from Infected Families.
Central	58	88
Northern	113	186
Eastern	173	245
South-Eastern	201	240
South-Western	58	98
Total	803	857

The trend of the incidence of scabies in the City since 1943, when the disease was very prevalent throughout the country, is shown by the following table :—

Year.	No. of Families Affected.	New Cases in these Families.
1943	10,441	21,218
1944	7,983	15,528
1945	5,888	12,093
1946	2,862	7,487
1947	2,306	4,055
1948	1,304	2,116
1949	803	857

Until November, 1949, there were two centres for the treatment of adults and children of pre-school age, one at Baird Street Auxiliary Hospital and the other at Moffat Street Reception House. Moffat Street Reception House has since been adapted for the inoculation of children with B.C.G. vaccine for the prevention of tuberculosis.

Treatment of scholars is at present adequately met in addition by the Education Health Service facilities. It is essential that this Department should maintain some facilities for adults for the occasional problem case, and as a nucleus for bath-treatment centres in an epidemic.

RESPIRATORY DISEASES.

The occurrence of an outbreak of influenzal pneumonia in the early months of the year was responsible for an increase in the annual death rate from respiratory diseases. Including influenza, the total mortality rate per million of the population was 1,086 compared with 824 for the previous year which was the lowest on record for the City. Although this increase appears considerable, it is relatively small when compared with the fluctuations which took place in respiratory diseases up to the beginning of the 1930's when mortality rates varied between 1,400 and 2,100 per million of the population.

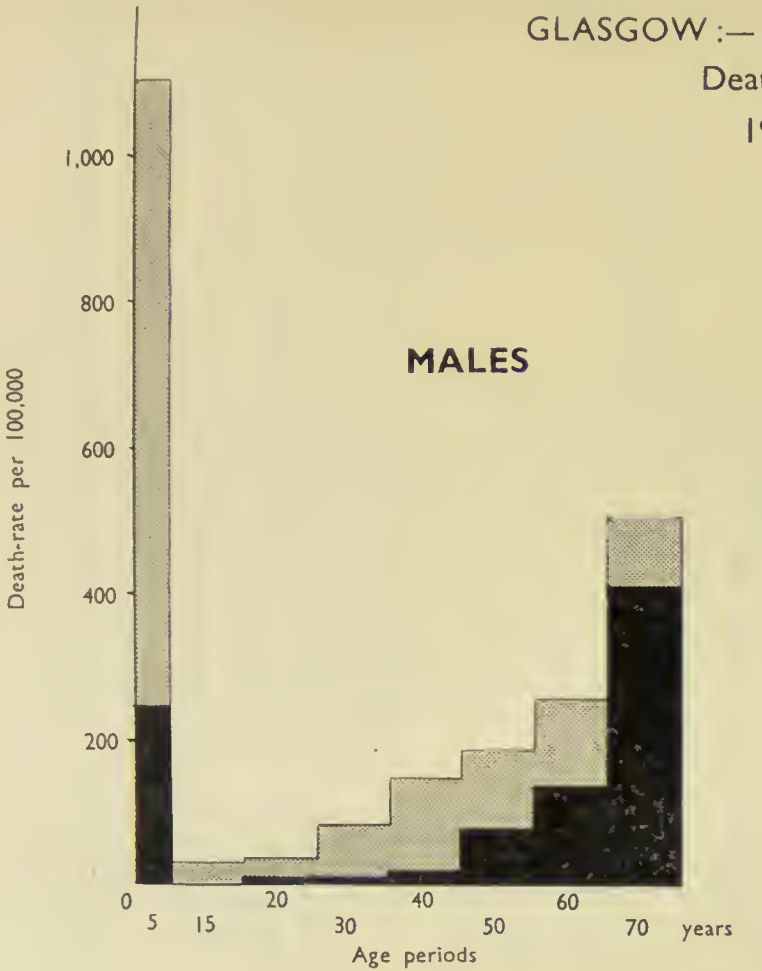
The death rate from influenza was 118, compared with 33 for 1948. Most of the mortality was recorded in the first two months of the year when there was a widespread prevalence of colds of an influenzal type throughout the City. Although influenza often occurs at that time of year, high rates are usually associated with periods of raw, damp weather and low temperatures.

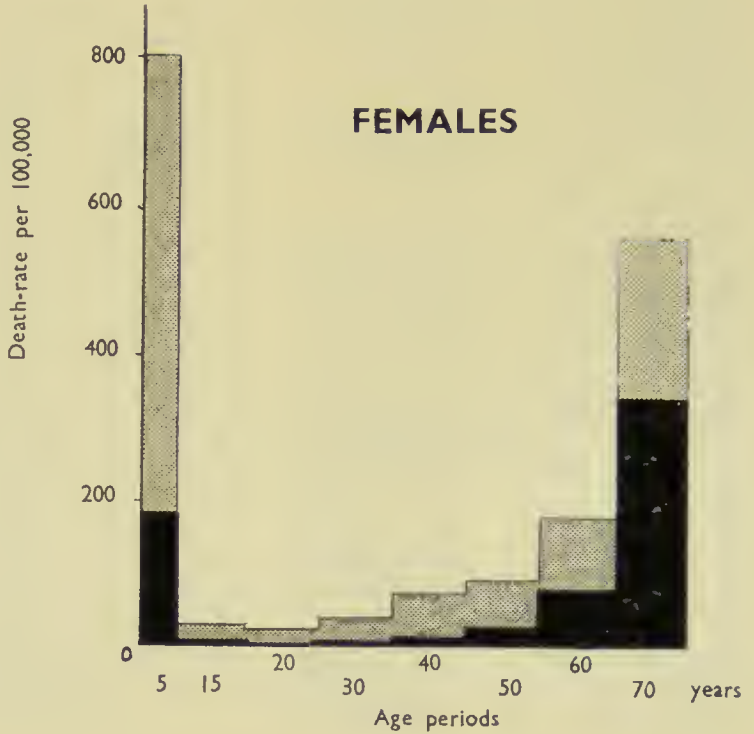
A study of the annual death rates indicates that the peaks in the mortality from respiratory disease are occurring every third year at the present time. Fluctuations in pneumonia coincide with those of influenza and in 1949 the mortality from pneumonia at 548 per million of the population was 104 higher than the rate for the previous year. Most of the deaths occurred at ages over 50 years for both sexes and among infants in the first year of life. Male infant deaths numbered 88 and females 65, and from then until after the age of 35 deaths are relatively few—males, 28, and females, 13.

GLASGOW :—PNEUMONIA (including Influenzal Pneumonia)

Death-Rates per 100,000 at AGE periods

1930-32 1947-49





In view of the change in the age constitution of the population and the reduction that has taken place in mortality from these diseases, a chart showing the mortality at various age periods during the past three years for each sex is given on the previous page to show a comparison with the death rates per 100,000 at the same age periods for the years 1930-32, based on the census population of 1931.

The chart shows the reduction that has taken place at all age periods for both sexes. The greatest reduction is in the death rates of young children under five years of age, the rate for males being 243 per 100,000 compared with 1,096 in 1930-32, while the corresponding rates for females are 174 and 810.

From then onwards there has been a corresponding relative reduction in both sexes except in the case of males over 65 years In actual numbers there has been a greater saving of male lives generally at intervening ages, the drop in the death rate at the age periods 25-35 and from 35-45 being very pronounced. For instance, the death rate in the former decennium has been reduced from 81 to 6 and in the latter from 149 to 21. The rates on which the charts are based are as follows :—

GLASGOW.

PNEUMONIA AND INFLUENZAL DEATH RATES AT AGE PERIODS.

Rate per 100,000.

Males.		−5 Yrs.	−15 Yrs.	−25 Yrs.	−35 Yrs.	−45 Yrs.	−55 Yrs.	−65 Yrs.	65+ Yrs.	Total.
1930-32 ...	...	1,096	30	44	81	149	181	257	502	2,210
1947-49 ...	...	243	4	6	6	21	68	138	409	754
Females.										
1930-32 ...	...	801	23	20	41	68	87	166	563	1,511
1947-49 ...	...	174	5	2	4	11	19	69	338	510

The total number of cases of acute primary pneumonia registered was 4,498 and of influenzal pneumonia 76. Of the former, 2,234 were removed to fever hospitals and 1,130 to other institutions. The corresponding figures for influenzal pneumonia were 4 and 12 respectively. Comparative figures with these are given in Appendix Table XV, while the seasonal incidence is recorded in Table XVI.

Although the death rates from bronchitis also fluctuate with the acute respiratory infections, the mortality has been falling during the past thirty years despite the increasing numbers of persons surviving

at older ages, at which most of the deaths occur. At ages over 55 years there were 144 male deaths out of a total of 203 for all ages, while for females the corresponding figures were 104 and 121. The total mortality rate per million of the population was 292, and in the following table is compared with the rates for previous years :—

	1949.	1948.	1947.	1946.	1945.	1944.
Influenza ...	118	33	74	149	44	75
Pneumonia ...	548	444	665	661	529	696
Bronchitis ...	292	221	351	320	324	312
Others ...	128	126	131	142	91	118
	1,086	824	1,221	1,272	988	1,201

The age distribution of deaths is given in Appendix Table IX.

TUBERCULOSIS.

The higher incidence of this disease is still maintained ; indeed the number of cases of pulmonary tuberculosis occurring during the year was 2,829, the highest number recorded since 1910. Cases of non-pulmonary tuberculosis, however, are little more than half the number recorded as recently as 1943. The fall in the number of cases of non-pulmonary disease, which is frequently of bovine origin, is due to the cleaner milk supply and the extension of pasteurisation.

The following table shows the number of cases occurring annually since 1935 :—

	Pulmonary Tuberculosis.	Non-Pulmonary Tuberculosis.	All Tuberculosis.
Average 1935-39 ...	1,650	657	2,307
1940	1,908	669	2,577
1941	2,066	661	2,727
1942	2,324	714	3,308
1943	2,778	735	3,513
1944	2,758	671	3,429
1945	2,641	555	3,196
1946	2,809	508	3,317
1947	2,765	512	3,277
1948	2,775	373	3,148
1949	2,829	390	3,219

The total of pulmonary cases shows to what an extent the number of notified cases has increased over the pre-war average and how this high incidence is being maintained.

The age and sex of the pulmonary cases notified during the year are given below.

1949 *Cases.*

Age (Years)	Pulmonary Tuberculosis Males	Pulmonary Tuberculosis Females	Non-Pulmonary Tuberculosis Males	Non-Pulmonary Tuberculosis Females
— 5 ...	104	94	51	41
—15 ...	164	178	46	48
—25 ...	395	598	48	79
—35 ...	234	299	16	13
—45 ...	206	121	12	8
—55 ...	161	42	8	4
—65 ...	141	20	3	7
+65 ...	50	22	2	4
	1,455	1,374	186	204

It will be seen from this table that the distribution of cases is similar to that of previous years. Males were again more heavily affected than females and at a slightly later age. Females between the ages of 15 and 35 years and males between 25 and 45 years are most commonly attacked by the disease.

The following table illustrates the number of persons notified during the year who have been in known contact with cases of tuberculosis, both pulmonary and non-pulmonary.

Contact and Degree.

		Pul.	Non-Pul.
No contact		2,320	336
Living or had lived in same house with case of—			
T.B.+	At time of sickening	123	12
	Within 5 years	58	3
	More than 5 years before	26	1
T.B.—	At time of sickening	184	21
	Within 5 years	43	3
	More than 5 years before	32	1
Non-Pul.	At time of sickening	27	5
	Within 5 years	9	4
	More than 5 years before	7	4
	Totals	2,829	390

It will be noted that 207 of the notified cases have been living in the same house as a case of pulmonary tuberculosis with a positive sputum and 259 cases have been living in households containing a case of pulmonary tuberculosis with a negative sputum. These figures are very significant and strongly support the priority rehousing of tuberculous families. In fact, the present insufficiency of staffed hospital beds has added considerably to the socio-medical problems falling to be dealt with by this Department. The three most serious accommodation deficiencies are for the treatment of pulmonary tuberculosis, the aged sick, and young mental defectives. Of these, the waiting list for pulmonary tuberculosis is the largest, and the position both from the point of view of the patients and of the community is most grave. As in the case of the aged sick, the Department's Home Help Service is used to alleviate distress, but both for cure and for the prevention of disease the urgent needs are for more hospital beds and more houses.

The position of the chronic tubercular patient in Glasgow is not enviable. As this report illustrates, more than half the families in Glasgow are living in one or two apartment houses, and as tuberculosis tends to attack the more poorly housed sections of the community it is found that the majority of the tubercular cases live in accommodation of this size. Such accommodation entirely precludes the adequate isolation of the infected person, and exposes contacts to repeated and often massive doses of infection. It is little wonder that the infection rate is high and that tubercular testing of the exposed contacts has shown a large proportion of positive reactors. Glasgow to-day has over 12,000 tubercular persons on the registers of the Department, this number being 3,000 more than the figure prior to the war. Priority rehousing is an absolute essential, and although 787 houses were allocated to families on account of tuberculosis during the year—the highest on record and more than twice the number in any previous year—an even larger allocation is essential if the waiting list of tubercular patients requiring more suitable homes is to be reduced to reasonable dimensions.

The following table gives the sleeping accommodation of cases in various sizes of houses. It shows that just as many cases as previously share their bed with other members of the family.

SIZE OF HOUSE (APARTMENTS).

	1		2		3		4		5	
	Ad.	Ch.	Ad.	Ch.	Ad.	Ch.	Ad.	Ch.	Ad.	Ch.
Pulmonary—										
Room to self	62	—	214	12	320	12	245	8	57	—
Bed to self ...	44	34	145	49	84	23	36	14	12	3
Others in same bed ...	231	62	462	101	233	43	132	19	15	2
Non-Pulmonary—										
Room to self	9	—	16	6	24	4	20	2	8	1
Bed to self ...	3	15	14	19	10	14	3	6	—	2
Others in same bed ...	24	28	52	33	29	14	11	6	2	1

The number of cases under treatment in hospitals and sanatoria at the end of the year was, for all practical purposes, the same as at the end of 1948, while the number discharged during 1949 was less than in the previous year (2,365 as against 2,511). Deaths in institutions were less, 351 compared with 486. This is mainly due to the inability of advanced chronic cases to gain admission to hospital.

NUMBER OF PATIENTS.

	In Institutions on January 1	Admitted during the year	Discharged during the year	Died in Institutions	In Institutions on December 31
Respiratory—					
Adults—					
Males	472	919	743	157	491
Females ...	590	1,166	1,021	143	592
Children—					
Males	102	103	94	8	103
Females ...	110	150	149	12	99
Non-Respiratory—					
Adults—					
Males	87	136	122	8	93
Females ...	95	116	95	10	106
Children—					
Males	109	91	74	7	119
Females ...	94	80	67	6	101
Total ...	1,659	2,761	2,365	351	1,704

The following table shows the number of cases of pulmonary and non-pulmonary tuberculosis notified in each of the municipal wards. As the figures relate to the new districts, care should be taken in comparing them with those given in previous years.

GLASGOW.—CASES OF TUBERCULOSIS NOTIFIED AND DEATH RATE PER MILLION IN EACH MUNICIPAL WARD DURING 1949.

Ward	Pulmonary Tuberculosis			Non-Pulmonary Tuberculosis		
	Cases		Death-rate Both Sexes	Cases		Death-rate Both Sexes
	Males	Females		Males	Females	
Shettleston and Tollcross	63	69	1,418	4	9	118
Parkhead	32	28	1,736	5	6	144
Dalmarnock	71	65	1,055	7	14	176
Calton	47	51	1,244	7	3	257
Mile-End	60	59	1,083	8	3	118
Dennistoun	25	24	946	4	1	105
Provan	—	—	1,417	—	—	—
Cowlairs	85	75	1,100	7	11	134
Springburn	34	26	912	5	2	79
Townhead	45	63	949	3	6	84
Exchange	70	53	1,028	15	12	343
Anderston	36	43	1,108	10	8	246
Park	33	18	723	1	2	120
Cowcaddens	6	6	1,186	—	1	136
Woodside	6	1	1,101	1	—	33
Ruchill	5	3	1,542	—	1	189
North Kelvin	42	48	684	8	9	72
Maryhill	35	32	998	5	4	—
Kelvinside	95	88	445	14	12	197
Partick (East)	36	33	409	4	6	123
Partick (West) ...	54	69	957	6	7	171
Whiteinch	25	25	1,184	—	3	42
Yoker	26	29	1,009	4	3	70
Knightswood	24	13	1,095	1	2	183
Hutchesontown ...	52	37	895	9	6	87
Gorbals	75	56	1,205	7	9	148
Kingston	29	44	774	11	6	68
Kinning Park	41	33	884	4	8	98
Govan	34	48	1,305	5	10	187
Fairfield	36	21	1,012	5	7	352
Craigton	38	31	893	1	2	76
Pollokshields	25	38	673	8	7	119
Camphill	19	6	449	4	—	41
Pollokshaws	30	45	1,194	6	7	232
Govanhill	25	33	471	3	3	108
Langside	21	9	516	—	4	80
Cathcart	20	14	362	1	—	90
Institutions	55	38	—	3	10	—
Harbour	—	—	—	—	—	—
Total for City ...	1,455	1,374	1,010	186	204	127

The introduction of the National Health Service has certainly done nothing to alleviate the problem of tuberculosis in Glasgow. It would be true to state in fact that the position has worsened since the introduction of the Act. The reasons for this state of affairs are not difficult to seek—firstly, the inability of the Hospital Board to increase materially the number of beds in sanatoria for tuberculosis patients, and secondly, the poor housing conditions which make the isolation of the patient virtually impossible in the large majority of homes. The subdivision of the tuberculosis service between the Regional Board and the Local Health Authority has been a disservice to tuberculosis as a whole. Tuberculosis is a social disease, and when a case occurs in any household it is not the patient only who requires attention but the entire family. It is satisfactory to report that, since the close of the year 1949, new preventive measures in the form of B.C.G. vaccination have been inaugurated by the Health and Welfare Department. This is a long term scheme from which no immediate reduction in the adult tuberculosis rate can be anticipated, although the number of cases of infant tuberculosis of all types should be reduced.

Lastly, experience has shown that hospital admission departments should be instructed to give priority to urgent cases of tuberculosis recommended by the Medical Officer of Health on domiciliary grounds. This is essential if a satisfactory liaison between the domiciliary and curative sections into which the Act divided the service is to be maintained.

VENEREAL DISEASE.

The incidence of venereal disease during the year 1949 showed an appreciable decrease both in acute syphilis and acute gonorrhoea in males and females as compared with the 1948 figures. This fall, which has been continuous since 1946, was maintained during the early months of 1950.

While acute syphilis in males is still 36 per cent. above the 1938 figure, acute syphilis in females and acute gonorrhoea in males are only fractionally higher than in 1938, while acute gonorrhoea in females is lower than in 1938.

The figures for the years 1938 to 1949 are shown in the following table :—

NEW CASES OF VENEREAL DISEASE FOR THE YEARS 1938-1949.

Year.	Acute Syphilis.		Acute Gonorrhoea.	
	Males.	Females.	Males.	Females.
1938	250	124	1,426	157
1939	293	118	1,358	143
1940	465	144	1,476	165
1941	671	279	1,720	246
1942	778	395	1,536	308
1943	671	368	1,323	407
1944	454	262	1,231	406
1945	365	252	1,301	398
1946	687	356	2,463	449
1947	597	247	2,164	305
1948	412	181	2,041	238
1949	341	128	1,559	142

In the case of congenital syphilis there has been a decrease in the groups "All Ages" and "Under One Year," the rate for the latter per 1,000 live births being 1·1 as compared with 1·3 in 1948.

The total number of new and transferred cases attending the centres has also decreased, as will be seen from the following table and as in acute venereal disease the highest point being the year 1946 :—

NEW AND "TRANSFERRED IN" CASES OF VENEREAL DISEASE ATTENDING THE CENTRES FOR THE FIRST TIME.

	Total New Cases.	Transferred In.
1938	5,189	245
1939	4,724	189
1940	5,021	219
1941	5,891	441
1942	6,344	642
1943	7,740	853
1944	6,544	735
1945	6,582	619
1946	9,937	1,495
1947	8,181	570
1948	7,554	818
1949	6,678	648

While there has been this decrease in cases diagnosed as suffering from acute venereal disease, the attendance at the centres of patients suffering from non-venereal conditions has not decreased to the same extent and although the figures both for males and females are now only 60 per cent. of the 1946 figure, they are far in excess of the pre-war statistics. A table showing the attendance of patients suffering from non-venereal conditions between the years 1941 and 1949 is given overleaf :—

ATTENDANCE OF PATIENTS SUFFERING FROM NON-VENEREAL CONDITIONS DURING YEARS 1941 TO 1949.

Year.	Males.	Females.	Total.
1941	880	246	1,126
1942	1,058	398	1,456
1943	2,002	708	2,710
1944	1,656	721	2,377
1945	1,674	799	2,473
1946	3,027	650	3,677
1947	2,458	547	3,005
1948	2,472	477	2,949
1949	2,402	470	2,872

Contact tracing work is carried out by the staff at the male and female *ad hoc* centres and has resulted in the attendance of a number of new patients. The number of contacts traced has fallen, as has also the percentage of those contacts who have attended the clinics for examination and treatment. A renewed effort is being made to trace contacts and persuade them to come to the centres for examination and treatment.

VENEREAL DISEASES, 1949—*Ad hoc* CLINICS.

Contact Tracing, and Follow-up of Sources of Infection.

Referred by Male Clinics.

	Wives.		Consorts.	
	Number.	Percentage.	Number.	Percentage.
Attended	95	81·9	41	44·1
Did not attend ...	21	18·1	52	55·9
	116		93	

Total Referred, 209; Total attended, 136—65·1 per cent.

Referred by Female Clinics.

	Husbands and Consorts.	
	Number.	Percentage.
Attended	34	54·8
Did not attend	28	45·2
Total Referred	62	

Syphilis.—The number of male patients suffering from acute syphilis coming to the clinics for the first time in 1949 was 341 which compares with 412 in 1948 and 597 in 1947. Acute syphilis in females decreased from 181 in 1948 to 128 in 1949. The 1947 figure was 247. The number of patients suffering from late syphilis increased to 323 as compared with 315 in 1948. As already mentioned, the incidence of congenital syphilis has decreased both in " All Cases " and in " Cases under One Year." The incidence of congenital syphilis is still high as compared with the optimum and it is hoped that an increased effort to persuade ante-natal patients found to be suffering from syphilis to continue treatment will lead to a reduction in congenital syphilis under one year.

CONGENITAL SYPHILIS.

Year.	All Cases.	Cases—1 Year.	Rate per 1,000 Live Births.
1922 ...	1,023	335	12·8
1927 ...	551	119	5·0
1932 ...	240	72	3·2
1937 ...	177	36	1·6
1941 ...	67	15	0·75
1942 ...	71	27	1·3
1943 ...	97	32	1·4
1944 ...	83	29	1·3
1945 ...	72	32	1·6
1946 ...	72	27	1·1
1947 ...	80	25	0·97
1948 ...	60	28	1·3
1949 ...	52	22	1·1

During the year 1949 10,497 pre-natal blood tests were carried out and 0·83 per cent. were found to be positive. This is the lowest percentage so far obtained since the institution of these tests.

PRE-NATAL BLOOD TESTS.

Year,	Number.	Percentage Positive.
1925	—	4·9
1930	1,749	2·8
1935	3,334	1·8
1940	8,714	1·3
1942	10,265	1·18
1943	11,067	1·7
1944	10,260	1·3
1945	10,853	1·18
1946	13,946	1·23
1947	13,250	1·46
1948	12,692	0·96
1949	10,497	0·83

All specimens are submitted to the Kahn Test and, if positive, to the Wassermann Test which is applied to the same specimen and a repeat specimen requested. A modified high sensitivity Laughlan test is used as a screening test for pre-natal specimens.

Gonorrhoea.—The incidence of acute gonorrhoea in males and females has fallen during the year, there being 1,701 cases in 1949 compared with 2,279 in 1948. Chronic gonorrhoea in both males and females has continued at a low level, the number of cases in females being 13. This very low figure compares with 312 in 1938. The improved methods of treating acute gonorrhoea developed in the last ten years have had a very considerable effect on the development of chronicity.

CHRONIC GONORRHOEA IN FEMALES.

Year.	Number.	Year.	Number.
1938	312	1944	54
1939	266	1945	42
1940	229	1946	48
1941	119	1947	38
1942	88	1948	22
1943	93	1949	13

Venereal Diseases in Seamen.—Seamen continue to form a proportion of the patients attending the three *ad hoc* male clinics—Black Street, Broomielaw and Bellahouston. Of the total new and transferred-in patients attending these clinics, 26 per cent. suffering from early syphilis and 16·2 per cent. of those suffering from acute gonorrhoea were seamen. These percentages are in excess of previous years but the actual statistics are given in the following table :—

BLACK STREET, BROOMIELAW, BELLAHOUSTON CLINICS.
NEW AND TRANSFERRED-IN PATIENTS.
PROPORTION OF SEAMEN TO TOTAL CASES.

	Early Syphilis.			Acute Gonorrhoea.		
	All.	Seamen.		All.	Seamen.	
1939	265	54	20·4%	1,133	75	6·6%
1940	403	133	33·0%	1,210	224	18·5%
1941	793	434	54·7%	1,671	539	32·3%
1942	1,082	589	54·4%	1,543	532	34·5%
1943	1,149	577	50·2%	1,393	436	31·3%
1944	831	452	54·3%	1,356	428	31·6%
1945	679	228	33·6%	1,478	370	25·0%
1946	1,264	164	13·0%	3,070	435	14·2%
1947	872	166	19·0%	2,340	330	14·1%
1948	614	106	17·2%	2,152	294	13·7%
1949	461	120	26·0%	1,646	267	16·2%

In-Patients.—During the year 319 patients were treated in hospital compared with 437 in 1948. The number of male patients admitted to Belvidere Hospital was 107, a decrease of 37 as compared with the

year 1948. Patients admitted to Baird Street Auxiliary Hospital and Ruchill Hospital decreased from 266 in 1948 to 210 in 1949. The following table shows the admission of patients to institutions for the treatment of venereal disease :—

TOTAL NUMBER OF PATIENTS ADMITTED FOR IN-PATIENT TREATMENT.

	Sex.	Primary Syphilis D.G.+W.R.−	Primary Syphilis W.R.+	Secondary Syphilis.	Latent Syphilis. (1st year).	All Later Stages.	Congenital Syphilis.	Extra-genital Infection.	Acute Gonorrhoea.	Chronic Gonorrhoea.	Soft Chancre.	Non-Specific Venereal Disease.	Non-Venereal.	Total Admissions.	Aggregate Days' Residence.	Average Days' Residence.
Belvidere Hospital	M.	14	12	7	—	44	4	—	12	—	3	11	—	107	3,382	31·6
Baird Street	M.	—	—	—	—	—	4	—	—	—	—	—	3	7	1,292	184·6
	F.	—	5	19	—	18	7	2	6	3	—	3	7	70	2,431	34·7
Ruchill Hospital	M.	—	—	—	—	—	8	—	—	—	—	—	—	8	1,142	142·8
	F.	1	6	18	—	66	12	—	12	1	—	—	9	125	4,099	32·8
Other Hospitals	M.	—	—	—	—	—	2	—	—	—	—	—	—	2	68	34·0
	F.	—	—	—	—	—	—	—	—	—	—	—	—	—	16	16·0
Totals		15	23	44	—	128	37	2	30	4	3	14	19	319	12,430	39·0

Attendance of Patients.—Patients attending for the first time at the various treatment centres numbered 6,678 compared with 7,554 in 1948. There were 85,334 attendances of new and old patients and 319 patients were admitted for in-patient treatment, 64 being admitted directly without previous attendance at the centres. The *ad hoc* centres dealt with 95·7 per cent. of all acute venereal disease. The following table summarises the attendances of new patients at the various centres :—

	Ad Hoc Treatment Centres Males.	*Ad Hoc* Treatment Centres Females.	Glasgow : All Centres.
Acute Syphilis (includes Primary, Secondary and Latent in the First Year of Infection)	311	85	474
Acute Gonorrhoea	1,554	131	1,701
Total Acute Venereal Disease ...	1,865	216	2,175
Late and Congenital Syphilis	120	73	370
Chronic Gonorrhoea	19	13	32
Total Chronic Venereal Disease ...	139	86	402
Other Diseases, including Soft Sore, Septic Balanitis, etc.	1,116	30	1,229
Non-Venereal	2,229	348	2,872

Incidence of Jaundice.—Jaundice still occurs among patients being treated for early and late syphilis though the complication is seldom of a severe nature. The percentage developing jaundice has decreased considerably, no doubt due to the increased use of penicillin in the treatment of syphilis. During the year, out of 311 cases of early syphilis attending the male *ad hoc* centres, 3·9 per cent. developed jaundice compared with 10·5 in 1948, while 1·7 per cent. out of 120 cases of late syphilis developed this complication. Only one of the early syphilitic jaundice patients required treatment in hospital and none of the cases of jaundice in late syphilis.

Follow-up of Defaulters.—The follow-up of defaulters by personal visits of the nurse almoners and in the case of the males by follow-up letters and visits by the senior attendants at the male centres resulted in a high proportion of the defaulting patients resuming treatment. During the year the nurse almoners visited 1,288 female patients on 2,024 occasions and persuaded 83·8 per cent. of the patients to resume treatment. On 114 occasions the wrong name and address had been given. With regard to the males, 3,043 follow-up letters were sent to 2,002 patients who defaulted during treatment and 76·3 per cent. of the patients resumed treatment. On 317 occasions the wrong name and address had been given.

SECTION V.

MENTAL SERVICES

Under the terms of the National Health Service (Scotland) Act, 1947, the outdoor administration of the Lunacy and Mental Deficiency Acts remains the function of the Local Health Authority.

These duties are carried out by four senior medical officers with experience of this type of work.

Responsibility is vested in the medical officers for the quarterly statutory visitation of boarded-out mental defectives and lunatics, and the supplying of such special reports on cases as may be required by the Board of Control.

The boarded-out mental defectives in the city number 955, and their regular visitation and supervision entails a considerable amount of work, particularly when, as in many instances, several visits are necessary in order to contact the patient and record the visit.

In addition, the Board of Control from time to time issues requests for special reports on certain patients in regard to their suitability for continued guardianship, removal to an institution or discharge. During the year under review these reports totalled 474.

The great majority of the boarded-out mental defectives are satisfactorily housed and cared for. There are a few cases, however, where the general conditions can only be described as "fair." In these instances, suggestions from the visiting medical officer almost always effect an improvement.

During the year, 120 new cases were added to the Roll. It would seem, therefore, that the public is making a good use of the service in response to the provisions of the new Health Act.

The statistics in regard to mental defectives boarded-out in the city are as follows :—

1.	Number on Roll at 1st January, 1949	951
2.	New cases added during year	120
3.	Cases removed from Roll during year	116
4.	Number remaining on Roll at 31st December, 1949	955
5.	Statutory visits made during year	3,733
6.	Additional visits necessitated during year	1,322
7.	Visits for purpose of Special Reports to Board of Control ...	474
8.	Visits to boarded-out lunatics during year	110
9.	Total visits for all purposes during year	5,639

Lunacy certification forms an integral part of the work of the Department. Certification of the insane in H.M. Prisons, Barlinnie and Duke Street, is undertaken in addition to that arising in the city as a whole.

This work involves a 24-hour continuous service in order to meet the needs of the general practitioners and the public. It has been found that some cases are in reality more suitable for the mental observation wards of a general hospital than for full certification in lunacy.

The Regional Hospital Board is responsible for the placing of each recommended case in a hospital, and close and cordial co-operation exists between the Department and the officers of the Board. As in the past, urgent cases have received special consideration. The statistics for the year are appended.

Analysis of Work Done re Lunacy, etc.

	Prisons		City		Totals		Grand
	Male.	Female.	Male.	Female.	Male.	Female.	Total.
Fully Certified	101	27	43	158	144	185	329
Mental Observation ...	—	10	17	26	17	36	53
Not Certified	—	3	31	55	31	58	89
Certified Institution ...	—	—	1	1	1	1	2
Re-certified	—	2	—	7	—	9	9
Cancelled	—	—	2	7	2	7	9
	101	42	94	254	195	296	491

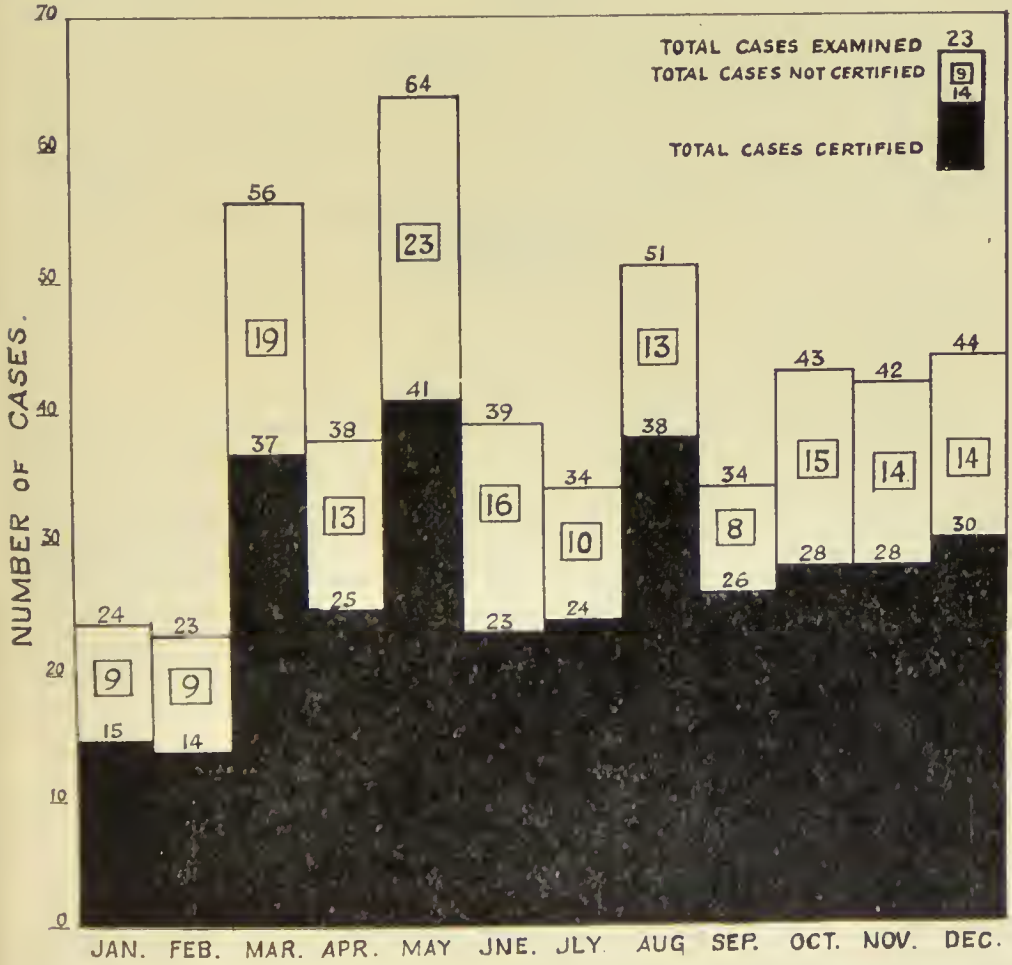
Disregarding the nine re-certified cases, it is found that, of 482 cases seen, 68·25 per cent. required full certification and 10·99 per cent. mental observation, while in 18·46 per cent. of cases no immediate action by the Department was required.

A disconcerting feature in the above analysis lies in the fact that 128 cases were certified from the Prisons.

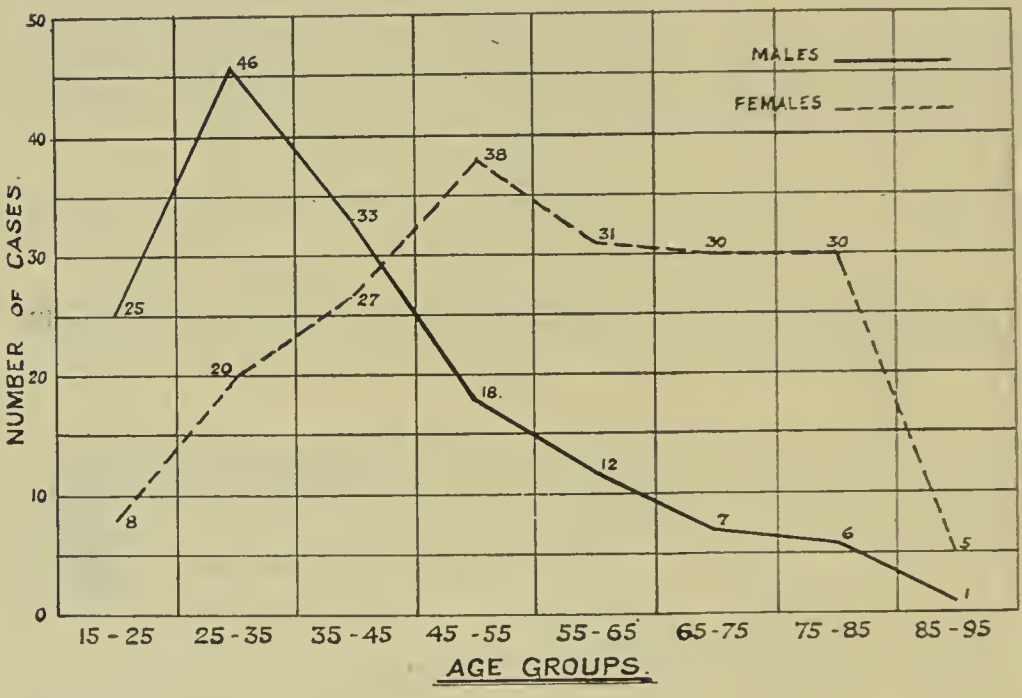
For several years past, the Medical Officer of Health has pointed out in his annual report that the admission of these " Fiscal " cases to ordinary mental hospitals causes undue strain on the staff in regard to administration and nursing.

It would seem that no solution of this difficulty has as yet been found.

The following shows, month by month, the cases certified in relation to cases seen.



As a matter of further interest, the figures of certification according to age group and sex were taken out, when the following emerged :—



The above shows three main features :—

(*a*) that below the age of 45 years, the male certification exceeds that of the female ;

(*b*) that over the age of 45 years, the reverse is the case. The picture here, however, is probably slightly coloured by the fact that some elderly females who have been on the mental observation waiting list for a long time tend to deteriorate to the point when they become certifiable —thus coming under the jurisdiction of this Department. This position does not arise in regard to males since their waiting period for admission to mental observation wards is much shorter than that of the females ; and

(*c*) three groups of mental disease show up clearly—schizophrenia, the involutional insanities and the senile dementias.

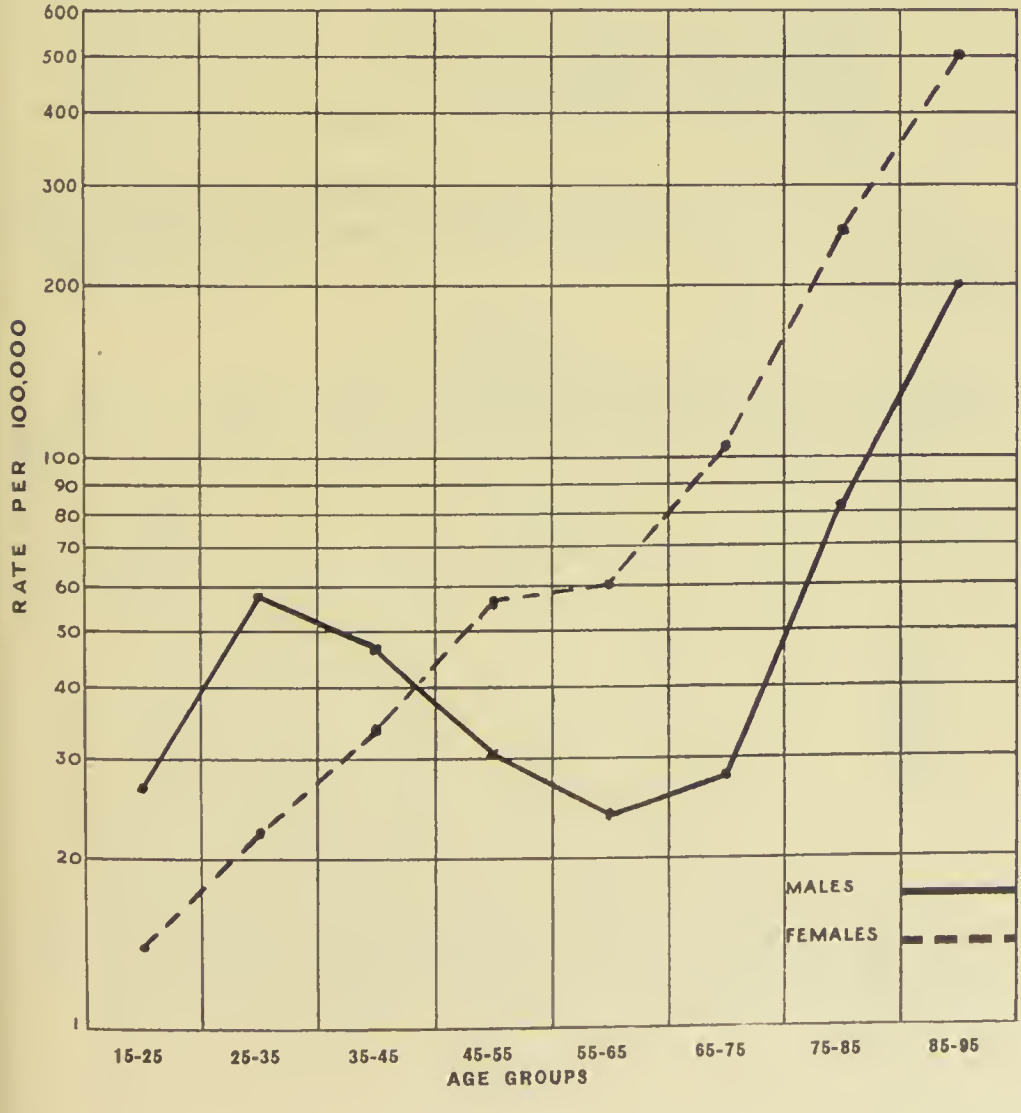
Again, as a final analysis of the lunacy position in the year under review, the following table shows the Lunacy Certification Rate per 100,000 of population according to age group and sex :—

Lunacy Certification Rate per 100,000 of Population according to Age Group and Sex.

1949.

Males.				Females.			
Age Group.	No.	Population.	Rate.	Age Group.	No.	Population.	Rate.
15-25 years	25	92,500	27·00	15-25 years.	8	100,000	8·00
25-35 ,,	46	80,000	57·50	25-35 ,,	20	90,000	22·22
35-45 ,,	33	71,000	46·19	35-45 ,,	27	80,000	33·75
45-55 ,,	18	59,000	30·50	45-55 ,,	38	67,500	56·29
55-65 ,,	12	50,000	24·00	55-65 ,,	31	51,000	60·78
65-75 ,,	7	25,000	28·00	65-75 ,,	30	29,000	103·44
75-85 ,,	6	7,300	82·19	75-85 ,,	30	12,000	250·00
85-95 ,,	1	500	200·00	85-95 ,,	5	1,000	500·00

The rates show, on the male side, a peak at the age 25-35 years, then a steady fall until the age of 65 is reached, after which there is a marked rise. In regard to females, the main feature is a steady and progressive rise in the rate according to age—a visual representation of this is shown below.



SECTION VI.

BLIND PERSONS ACTS.

During the year under review 808 persons were examined by the Regional Clinic for the first time, of whom 631 were examined at the clinic and 177 at home. In addition 85 applicants were re-examined, making for the year a total of 893 cases examined.

Of the 808 cases examined for the first time, 54·2 per cent. were certified blind within the meaning of the Act.

Sources of Candidates.—The source of candidates is shown as follows :—

Applicants for Blind Pension	86
Applicants for increased National Assistance	372
Applicants for Technical Training	11
Applicants for Free Tramway Pass	4
Applicants referred by Mission to Outdoor Blind ...	150
Unclassified	8

As in previous years it will be noted that the largest number examined was in connection with applications for increased National Assistance.

Table A.

Showing the Age and Sex Incidence of Applicants Claiming to be Blind Examined at the Certifying Clinic during the Year 1949.

Age.	Certified.			Rejected.		
	Males.	Females.	Total.	Males.	Females.	Total.
—1	—	—	—	—	—	—
1-4	2	2	4	1	—	1
5-15	3	3	6	2	—	2
16-29	12	2	14	4	3	7
30-39	12	4	16	5	4	9
40-49	18	9	27	7	13	20
50-59	14	28	42	12	17	29
60-69	50	53	103	29	17	46
70+	101	125	226	42	37	79
	212	226	438	102	91	193

From the foregoing table it will be seen that 83·2 per cent. of the applicants were over 50 years of age and 48·3 per cent. were 70 and over. The sexes were almost equal—314 males to 317 females.

Table B.

Showing the Allocation of the Applicants Examined during 1949 at the Certifying Clinic among the Local Authorities composing the Joint-Committee for the Blind for Glasgow and the South-West of Scotland.

	Certified.			Rejected.		
	Males.	Females.	Total.	Males.	Females.	Total.
Glasgow	78	84	162	51	45	96
Airdrie	4	2	6	5	3	8
Coatbridge... ...	15	3	18	9	3	12
Hamilton	6	8	14	7	2	9
Motherwell & Wishaw	6	3	9	1	—	1
Rutherglen ...	1	2	3	—	—	—
Other Lanarkshire	19	22	41	5	5	10
Greenock	6	6	12	1	4	5
Paisley	20	13	33	7	4	11
Port Glasgow ...	2	2	4	—	2	2
Other Renfrewshire	6	7	13	—	1	1
Dumbarton ...	4	5	9	2	1	3
Clydebank ...	1	2	3	2	2	4
Other Dunbartonshire	6	11	17	2	4	6
Falkirk	2	3	5	—	—	—
Stirling	1	1	2	—	1	1
Other Stirlingshire	4	9	13	2	1	3
Ayr	1	7	8	—	2	2
Kilmarnock ...	5	4	9	1	2	3
Other Ayrshire ...	18	18	36	7	3	10
Argyll County ...	4	10	14	—	1	1
Bute County ...	1	1	2	—	2	2
Dumfries Burgh ...	2	3	5	—	3	3
Not stated ...	—	—	—	—	—	—
Total ...	212	226	438	102	91	193

Of the applicants examined 258 or 40·8 per cent. resided in Glasgow, compared with the corresponding percentage of 39·8 during the preceding year.

In 1949, 85 cases were re-examined. The alterations in the decisions of the clinic as a result of re-examination were as follows :—

(*a*) Certified blind on first examination and decision unaltered on re-examination	9
(*b*) Certified blind on first examination and decision reversed on re-examination	1
(*c*) Certified not blind on first examination and decision unaltered on re-examination	17
(*d*) Certified not blind on first examination and decision reversed on re-examination	33
(*e*) Certified blind on second examination and decision unaltered on re-examination	1
(*f*) Certified blind on second examination and decision reversed on re-examination	—
(*g*) Certified not blind on second examination and decision unaltered on re-examination	15
(*h*) Certified not blind on second examination and decision reversed on re-examination	9
Total	85

Follow-up Scheme.—During the past few years a scheme has been in operation to follow up those patients examined at the Regional Clinic and considered by the examining surgeons as likely to benefit from further treatment. The scheme has been made possible by the co-operation of the Mission to the Outdoor Blind for Glasgow and the South-West of Scotland. The home teachers make special enquiries twice yearly regarding such patients and report progress. Where operative or other treatment has been completed, the patient is summoned to the clinic for examination and the improvement or otherwise noted. During the year the teachers investigated 36 cases certified blind with the following results :—

	Treatment Carried Out.				Not Carried Out.			
Treatment Recommended.	No. of Cases.	Still Blind.	Not now Blind.	Total.	Died.	Unwilling.	Unfit.	Others.
Surgical	62	—	4	4	6	21	18	13
Medical	9	2	1	3	—	—	4	2
	71	2	5	7	6	21	22	15

The large group entitled in the table " unwilling " is composed mainly of elderly people who do not feel inclined, owing to their advanced age, to undertake an operation. The group " others " numbering 13 in the table consists of patients who for some medical reason are not yet ready for operative procedures, *e.g.*, patients whose cataract has not yet " matured."

Table C.

Causes of Blindness.

The causes of blindness of the 438 cases certified blind during 1949 are shown in the following table :—

Congenital and Undetermined—

Congenital abnormalities and developmental defects	14
Tumour of globe and orbit	3
Myopia	62
Other errors of refraction	—
Glaucoma, primary	60
Cataract, primary	138
Other primary ocular defects (primary detachment)	6

Infectious and Toxic—	
(*a*) Exogenous :	
Ophthalmia neonatorum	3
Trachoma	1
Local septic infection of coats of eye	4
Other local specific infections (gonorrhoea) (mycosis)	—
(*b*) Endogenous :	
Gonorrhoea	—
Syphilis, congenital	5
Syphilis, acquired, including not definitely congenital	6
Specific fevers	1
Meningitis (non-tuberculous), including cerebro-spinal fever	—
Tuberculosis	—
Phlyctenular, strumous and similar, not definitely tuberculous	6
Septicaemia, acute	—
Septicaemia, chronic ; autotoxic, focal sepsis	26
Other general infections and organismal diseases	2
Traumatic and Chemical—	
Birth trauma	1
Non-industrial trauma	3
Industrial trauma	2
War trauma	2
Trauma, category not ascertainable	—
Chemico-toxic, non-industrial (tobacco)	4
Scheduled industrial diseases (lead) (pyroxylin) (carbon bi-sulphide) (aniline) (phosphorus) (glass-blowers' cataract) (metal workers' cataract) (miners' nystagmus)	—
Sympathetic ophthalmia	4
Systemic Diseases—	
Anaemia and blood diseases	1
Diabetes	23
Nephritis	1
Pregnancy	1
Vascular diseases including cerebral vascular lesions	40
Intracranial neoplasm	10
Other diseases of central nervous system	5
Functional disturbances (hysteria) (malingering)	—
Other general diseases	1
Not Ascertainable Definitely	3
Total	438

The largest number is included in the category " Congenital and Undetermined " and the most important individual causes of blindness are still glaucoma, cataract, myopia and septicaemia.

SECTION VII.

PORT HEALTH AUTHORITY.

There was no change in the working arrangements at the port during the year and staffing arrangements remained as shown in previous reports.

The amount of foreign and coastwise shipping calling and sailing outwards from the port totalled 18,637, with a tonnage of 12,664,010. These figures are derived from the same source as last year. Cargoes handled during that period showed an increase over the previous period, the figures being 5,753,853 and 5,595,956 last year. Foreign importations accounted for 3,067,846 tons and exports for 1,069,128 tons, while coastwise traffice accounted for 752,760 tons inwards and 864,119 tons outwards. The nett increase was 157,897 tons.

During the year 1,272 vessels from foreign ports, an increase of 150 over last year's total, were boarded. There were 401 arrivals from the Irish Free State, this figure being one less than the previous year. Of the 1,272 vessels from foreign ports 726 were from infected ports and 546 from non-infected ports.

Particulars of arrivals are given in the following tables :—

NATIONALITY OF VESSELS ARRIVING DURING 1949.

Nationality.	Ships.	Crews.	Passengers.
British	943	50,416	1,490
Costa Rican	1	11	—
Danish	30	805	55
Dutch	35	635	—
Egyptian	1	35	4
Finnish	6	152	—
French	7	452	—
German	1	22	—
Greek	7	225	—
Icelandic	9	392	1,152
Italian	6	202	—
Indian	8	607	—
Norwegian	49	1,488	38
Panamanian	14	444	—
Polish	3	147	12
Portuguese	2	44	—
Spanish	15	610	1
Swedish	78	2,342	20
Turkish	1	41	—
U.S.A.	54	2,560	40
Yugo Slav	2	85	—
Total	1,272	61,715	2,812

Tonnage of Vessels Arriving during 1949.

Month.	No. of Ships.	Crews.	Net. Reg. Tonnage.
January	90	4,697	282,837
February	88	3,935	282,831
March	109	5,040	315,023
April	104	4,787	318,192
May	117	5,551	379,616
June	118	5,895	380,908
July	114	5,334	322,907
August	122	6,303	399,676
September	92	4,025	272,128
October	116	5,685	379,355
November	102	5,781	361,350
December	100	4,682	301,008
Total	1,272	61,715	3,995,831

Nationality of Ships' Crews Arriving during 1949.

Month.	British.	Natives of India.	Chinese.	Other Nationalities.	Total.	Passengers.
January ...	2,526	1,242	232	697	4,697	42
February ...	2,070	674	182	1,009	3,935	22
March	2,325	1,273	144	1,298	5,040	22
April	2,907	700	125	1,055	4,787	201
May	31,061	983	175	1,287	5,551	199
June	2,959	1,613	207	1,116	5,895	506
July	2,340	1,076	46	1,872	5,334	713
August	3,616	1,139	205	1,343	6,303	500
September ...	2,154	580	182	1,109	4,025	356
October	2,820	1,834	108	923	5,685	136
November ...	3,699	943	239	900	5,781	105
December ...	2,268	1,341	128	945	4,682	10
Total	32,790	13,398	1,973	13,554	61,715	2,812

NUMBER OF SHIPS FROM FOREIGN PORTS AND IRISH FREE STATE DURING 1949.

Month.	From Infected Ports.									From Non-Infected Ports. Direct and Coastwise.			Total. From Foreign Ports.			From Irish Free State
	Class "A"—Direct.			Class "B"—Coastwise.			Total "A" and "B."									
	Ships	Crews	Passengers	Ships	Crews	Passengers	Ships	Crews	Passengers	Ships	Crews	Passengers	Ships	Crews	Passengers	
January	17	891	24	35	2,197	4	52	3,088	28	38	1,609	14	90	4,697	42	29
February	21	876	18	28	1,468	2	49	2,344	20	39	1,591	2	88	3,935	22	37
March ...	31	1,232	4	34	2,335	12	65	3,567	16	44	1,473	6	109	5,040	22	41
April ...	28	1,346	199	39	2,171	—	67	3,517	199	37	1,270	2	104	4,787	201	37
May ...	26	1,189	103	39	2,285	19	65	3,474	122	52	2,077	77	117	5,551	199	33
June ...	24	1,128	103	43	2,993	4	67	4,121	107	51	1,774	399	118	5,895	506	28
July ...	24	1,042	131	37	2,240	2	61	3,282	133	53	2,052	580	114	5,334	713	30
August	23	975	118	41	3,073	12	64	4,048	130	58	2,255	370	122	6,303	500	40
Septemb'r	12	514	81	32	1,771	—	44	2,285	81	48	1,740	275	92	4,025	356	34
October	19	757	15	51	3,428	3	70	4,185	18	46	1,500	118	116	5,685	136	33
November	21	1,073	11	41	3,034	—	62	4,107	11	40	1,674	94	102	5,781	105	30
December	20	827	7	40	2,580	—	60	3,407	7	40	1,275	3	100	4,682	10	28
TOTAL ..	266	11,850	814	460	29,575	58	726	41,425	872	546	20,290	1,940	1,272	61,715	2,812	400

There were no cases of plague, cholera, yellow fever, smallpox or typhus fever reported during the year, nor were there any outbreaks of typhoid fever on board ships arriving in the harbour. There was one case of paratyphoid fever and the patient, a lascar seaman, was removed to hospital where he remained for almost five months, after which he was repatriated to his own country as a chronic carrier.

One hundred and sixty cases of illnesses with two deaths were discovered on board vessels on arrival, eighty-five of which were removed to hospital, four were allowed to travel to their home address one died, and fifty-nine were referred to out-patient clinics. The two deaths occurred on two different vessels. One was the master of a vessel who died 48 hours before the vessel arrived here—cause of death, internal haemorrhage. The other, ship's carpenter, died from coronary thrombosis.

Dysentery.—An outbreak of dysentery (Sonne) occurred among members of the crew of a vessel during a voyage from West African ports to the United Kingdom. Four cases, all members of the coloured staff, were removed to hospital, one at Greenock and three at Glasgow. The master of the vessel stated that several other members of the crew suffered from diarrhoea and reported sick during the voyage, but, with the exception of one man who was " paid off " unfit for duty on arrival at Greenock, all recovered within a few days.

Specimens of faeces and urine from the members of the crew who suffered from diarrhoea during the voyage were submitted to the City Bacteriologist for examination with negative result.

With the exception of the Chief Steward, the entire catering staff, consisting of chief cook, assistant cook, assistant steward and pantry boy, were removed to hospital. All four lived together in a four-berth cabin, in indescribably dirty conditions, which may have been partly due to the sick condition of the occupants.

No further cases occurred during the stay of the vessel here and when she sailed for another port in the United Kingdom details of the outbreak were sent to the Port Medical Officer in that port.

Cases of Illness found on Vessels on Arrival at Glasgow.

Disease.	Removed to Hospital.	Sent Home.	Referred to Clinic	Left on Board.	Died.	Total.
Amoebic Dysentery	2	—	—	—	—	2
Bacillary ,, ...	3	—	—	—	—	3
Chickenpox	4	—	—	—	—	4
Pneumonia	13	2	—	—	—	15
Malaria	7	—	—	—	—	7
Measles	1	1	—	—	—	2
Paratyphoid	1	—	—	—	—	1
Mumps	2	—	—	—	—	2
Medical Observation	2	—	—	—	—	2
Mental Observation	2	—	—	—	—	2
Pyrexia Unknown Origin	4	—	—	—	—	4
Venereal Disease ...	—	—	59	—	—	59
Injuries	4	—	—	—	—	4
Other Diseases ...	40	2	—	10	1	53
Total ...	85	5	59	10	1	160

Cases of Illness Reported Occurring on Vessels during the Voyage.

Disease	How Disposed of.
Heart Failure	Buried at sea.
Coronary Thrombosis	Died. Body landed at Glasgow.
Venereal Disease	To hospital at Aden.
Heart Attack	Landed at Holyhead.
Measles	Landed at Liverpool.
Sudden Death	Body delivered to Coroner at Bootle.
Venereal Disease	To hospital at Port Said.
Septic Hand	To hospital at Port Said.
?	Died at sea. Buried at Casablanca.
Jaundice	To hospital at Liverpool.
Pneumonia	Died and buried at sea.
Cancer	To hospital at Liverpool.
Dermatitis	Landed at London.
Mumps	Landed at Liverpool.

Aliens' Act, 1920.

The total number of vessels carrying alien passengers to the port showed a decrease this year, the figures being 63 against 75, but the number of aliens showed an increase from 717 to 1,092. There were

no rejections on medical grounds. The following table shows the nationality of the aliens together with the numbers :—

Austrian	2	Norwegian	7
Belgian	2	Other Non-European ...	2
Danish	14	Portuguese	1
Dutch	3	Spanish	6
Egyptian	4	South American	2
French	4	Swedish	16
German	1	Swiss	3
Icelandic	827	Stateless	5
Italian	3	U.S.A. Citizens ...	190

Parrots (Prohibition of Import) Regulations (Scotland) 1930.

Three parrots and nine budgerigars were found on board eight vessels on arrival. In each case the owners gave a written undertaking that the birds would not be landed in this country.

Destruction of Rats.

A total number of 3,653 rats were destroyed during the year, 2,951 on board ships and 702 in sheds and other premises. Of the total number of rats, 2,544 were found dead after fumigation and 1,109 were trapped. Five hundred and one were submitted to the City Bacteriologist for examination for bacillus pestis with negative result.

One serious infestation arose from the storing of large quantities of maize and oats in lofts above cargo sheds in Princes Dock. The lofts were rented from the Clyde Navigation Trustees and without any preparation whatever the grain was moved in. While the lofts are quite satisfactory for the purposes for which they were built they were not intended for the storage of rat attractive foodstuffs for long periods. Considerable damage was done to the grain, particularly the oats, the maize being practically untouched. Routine trapping over a period failed to control the infestation and intensified measures of destruction were put into force, but while these measures produced satisfactory results, they can only be considered temporary. Fumigation was considered, but as the lofts could not be rendered gas-tight without considerable labour and expense the proposition was dropped. Meetings with representatives of the owners of the grain took place from time to time and it was finally agreed to remove it from the lofts to more suitable premises at the earliest possible time.

The problem of storage of rat attractive foodstuffs over long periods is difficult and the only satisfactory solution, even when they are stored in reasonably well rat-proofed premises, is a quick turn-over of stocks.

In the following tables details are shown of the rats destroyed on board ship, in sheds and other premises adjacent to the harbour.

ON BOARD SHIP.

Method of Destruction.	Infected Ports.				Non-Infected Ports.				Total
	R. Rattus		R. Norvegicus		R. Rattus		R. Norvegicus		
	M.	F.	M.	F.	M.	F.	M.	F.	
HCN	1,409	792	—	—	229	114	—	—	2,544
SO_2	—	—	—	—	—	—	—	—	—
Trapping ...	147	93	—	—	65	42	—	—	347
	1,556	885	—	—	294	156	—	—	2,891

SHEDS AND OTHER PREMISES.

R. Norvegicus		R. Rattus		
Male.	Female.	Male.	Female.	Total.
44	25	402	291	762

In addition to the above 373 mice were found dead after fumigation.

Deratisation and Deratisation Exemption Certificates.—Three hundred and eighty-six certificates were issued during the year—122 Deratisation Certificates and 264 Deratisation Exemption Certificates. One hundred and thirteen of the Deratisation Certificates were granted after satisfactory fumigation and nine after trapping operations had been carried out. Forty-three of the total number of certificates were granted to new vessels prior to sailing on their maiden voyage. Four of that number required fumigation and two required trapping. The two vessels on which trapping was resorted to showed such slight evidence of rat infestation that it was not considered necessary to require complete fumigation. On one slight evidence was confined to No. 4 Hold, and the engine-room and on the other to the engine-room and provision storerooms. Repressive measures over a period produced five rats on the first vessel and four on the second. Deratisation Certificates were issued in each case.

HYGIENE IN CREWS' QUARTERS, ETC.

Inspection and re-inspection of vessels arriving in the port resulted in the discovery of 713 defects, the majority of which were remedied before the vessels sailed for other ports. This figure of 713 is considerably less than the figure of 1,220 for last year and may be accounted for by the greater number of recently constructed vessels using the port during the year, in the improved accommodation provided in older vessels, and in a lesser degree to the increased sense of "good

housekeeping" of the men using the accommodation. Although the number of instances of vermin infestation showed a slight reduction this year over the previous year, this condition still accounts for the largest number of defects discovered.

Seventy-eight "intimations" in terms of the Public Health (Scotland) Act, 1897, were served and 127 verbal intimations were given in respect of nuisances discovered on board 265 vessels.

The following tables show the type of defects discovered :—

	Coasters.	Foreign Arrivals.	Totals.
General Neglect—			
Drinking Water Tanks	—	7	7
Accummulations of Garbage	1	26	27
Gear in Sleeping Compartments	—	3	3
	1	36	37
Structural Defects—			
Ports or Deadlights leaking	5	21	26
Deckheads leaking	2	42	44
Heating Apparatus defective	1	9	10
Floors broken	—	3	3
Lighting defective	—	—	—
Ventilation defective	—	1	1
Food Locker Doors broken	—	8	8
Steampipes leaking	—	15	15
	8	99	107
Wash Places and Water-Closet Compartments—			
Seats broken or missing	—	21	21
Doors broken or defective	—	9	9
W.C. Basins broken	—	3	3
Lighting defective	—	—	—
Ventilation defective	—	4	4
Wash Basins broken	—	2	2
Soilpipe or Storm Valve defective	—	8	8
Floors broken	—	—	—
	—	47	47
Functional Neglect—			
Paintwork dirty	1	39	40
Floors and Woodwork dirty	5	38	43
Tables and Benches dirty	8	40	48
Alleyways dirty	1	36	37
Food Lockers dirty	4	37	41
Verminous condition	1	195	196
Galleys dirty	—	3	3
Scuppers choked	2	19	21
Accumulation of Rubbish	—	25	25
Beds and Bedding dirty	—	—	—
	22	432	454

Wash Places and Water-Closet Compartments—	Coasters.	Foreign Arrivals.	Totals.
Troughs of W.C. Basins foul or choked ...	2	16	18
Floors or Woodwork dirty	—	4	4
Paintwork dirty	—	7	7
Scuppers choked	—	14	14
Flushing Apparatus defective	—	18	18
Wash Basins dirty or choked	—	7	7
	2	66	68
	33	680	713

Number and Nationality of Vessels on which Defects were Discovered.

Nationality.	No. of Arrivals.	No. Showing Defects.
Argentinian	—	—
British	943	191
Costa Rican	1	1
Chinese	—	—
Danish	30	1
Dutch	35	—
Egyptian	1	—
Finnish	6	—
French	7	—
German	1	—
Greek	7	2
Honduras	—	—
Icelandic	9	—
Indian	8	1
Italian	6	—
Norwegian	49	2
Panamanian	14	3
Polish	3	—
Portuguese	2	—
Russian	—	—
Spanish	15	4
Swedish	78	3
Turkish	1	—
U.S.A.	54	3
Yugo Slav	2	—
	1,272	261

Seventy-eight "Intimations" in terms of the Public Health (Scotland) Act, 1897, were served and 187 verbal intimations were given in respect of nuisances discovered on board 265 vessels.

Rags, Hair, Hides and Bones.—The following table shows the amount of imported rags, hair, hides and bones, the number of shipments and the country of origin :—

Source of Origin.	No. of Ships.	Rags Bundles.	No. of Ships.	Hair Various Bundles.	No. of Ships.	Hides Various Bundles.	No. of Ships.	Bones Bags.
Australia ...	—	—	—	—	1	3	—	—
Belgium ...	7	248	—	—	—	—	—	—
Canada ...	—	—	3	518	—	—	—	—
Egypt ...	13	12,021	—	—	—	—	—	—
France ...	13	6,969	—	—	—	—	—	—
India ...	—	—	—	—	12	442	32	59,236
Italy ...	6	2,024	—	—	—	—	—	—
South America	—	—	3	188	—	—	2	15,615
South Africa	—	—	—	—	3	76	4	4,189
New Zealand	—	—	1	38	1	46	—	—
United States	—	—	25	18,495	1	100	—	—

Anthrax.—Fifteen specimens of goat-skins from five consignments and two specimens of goat-hair from one consignment from India ; six specimens of cow-hair from two consignments, one of goat hair from one consignment, and one of hog-hair from one consignment from South America, were submitted to the City Bacteriologist who reported all specimens free from B. Anthracis.

No cases of anthrax were reported among the persons engaged in the discharge of the above articles.

Imported Food Regulations.

During the year approximately 642,767 tons of foodstuffs arrived at the port from overseas. This amount is less by 12,695 tons than that imported in the previous year. These figures do not include foodstuffs arriving on coasting vessels trading within the British Isles and Eire. Of the total shown above 3,604½ cwts. were found unsuitable for human consumption and were disposed of for either animal feeding, technical purposes, or destroyed.

One hundred and eighty-nine samples of foodstuffs were submitted to the City Analyst who reported twenty-five unsatisfactory, and eleven samples were submitted to bacteriological examination, five of which were found to be unsatisfactory. Three of the samples found to be bacteriologically unsatisfactory consisted of salami sausage which contained B. Coli and B. Proteus. One was a fat extender which contained Streptococci, and one a fruit cake which contained mould growths of penicillium.

With the relaxation of the control by the Ministry of Food of importations of certain foodstuffs, several consignments were imported by private traders and of these, two instances concerning Crystallised Ginger and Mixed Candied Peel and Crystallised Pineapple from Australia call for special mention. It will be recalled that during the years of control of foodstuffs by the Ministry of Food that local authorities and port health authorities were reminded that food under the control of the Government was not subject to the regulations governing such food, consequently importations found to be contrary to such regulations were notified to the Ministry and there the matter ended. Now traders seeking supplies of these commodities abroad have apparently forgotten or are in some cases ignorant of the requirements of regulations governing importations of such articles.

In the early part of the year a small quantity of Australian Crystallised Ginger arrived here and the City Analyst reported that a sample contained an excessive amount of sulphite preservative. This decision was arrived at on the assumption that while added sugar and gelatine were specified articles under the regulations and may contain sulphite preservative in stated amounts, the ginger itself was not so specified and should not, therefore, contain any sulphite preservative.

Later in the year, small consignments of Australian Crystallised Pineapple and Mixed Candied Peel were sampled and found to contain sulphite preservative in excess of the amount permitted by the Schedule to the Preservatives in Food, etc., Regulations. The attention of the importers was drawn to this infringment of the regulations and they in turn protested to the manufacturers who pleaded that so far as they were concerned this was a new industry and they were unaware of the required standard for such articles.

After careful consideration of all the circumstances it was decided to take no further action other than to warn the importers that future consignments must comply with the requirements of the regulations. Subsequent consignments were found to conform with the specified standard.

Samples of Persian sultanas taken from a consignment of 102,000 boxes which arrived here per coasting steamer from Liverpool were found to be free from preservative.

Following the receipt by the Dried Fruits Division of the Ministry of Food of information that a Persian packer of the sultanas had

washed the fruit in unclean river water several samples from the packers portion of the consignment were taken and submitted to the City Bacteriologist for examination, who reported that owing to the low bacterial count and absence of coliforms contamination by river water as alleged could not be supported. This information was communicated to the Ministry of Food and no further action was taken.

Sweetened cooking fat, a new product, appeared on the market during the year and the chief exporting countries were Sweden, Denmark and Holland. Ingredients of these fats are as follows :—

Swedish	...	(1) 50% Sugar, 30% Fat, 20% Milk Solids ;
		(2) 45% Icing Sugar, 30% Rape Seed Oil, 5% Glucose.
Danish	...	65% Icing Sugar, 30% Coconut Oil, 5% Glucose.
Dutch	...	(1) 40% Shortening (based on Palm Kernel Oil), 60% Sugar ;
		(2) 65% Sugar, 30% Fat (75% Palm Kernel Oil and 25% Soya Oil), 5% Glucose.

Samples of the fat submitted for examination were found to be in good condition.

The following table shows the character and quantity of the foodstuffs imported direct during 1949 (but does not include coastwise or trans-shipped cargoes).

Article.	Weight. Tons.	Cwts.	Article.	Weight. Tons.	Cwts.
Apples	6,266	17	Fruit Pulp	258	14
Acids	458	11	Fruit Cake	302	11
Almonds	351	7	Flour	39,965	15
Bacon	986	12	Fats	868	1
Bananas	7,726	17	Gelatine	9	10
Barley	14,003	—	Ginger (Preserved) ...	632	14
Butter	12,442	12	Grapes	908	17
Cheese	10,794	12	Grapefruit	4,784	18
Coffee	1,411	4	Ham	199	16
Cocoa	797	—	Honey	230	7
Condiments	690	13	Jams and Jellies ...	3,391	10
Confectionery	1	15	Lard	4,740	18
Eggs	2,759	13	Lemons	1,064	12
Egg Powder	1,003	18	Licorice	24	6
Egg Pulp	658	—	Maize	64,206	—
Egg Albumen	7	7	Macaroni	17	19
Eggs Frozen	2,397	3	Meats (Canned)	3,427	1
Farinaceous Foods ...	1,611	17	Milk (Canned)	222	5
Fish (Canned)	3,207	9	Milk (Dried)	15	—
Fruits (Canned)	6,427	7	Melons	427	—
Fruits (Dried)	21,811	15	Meal	865	13
Fruit Juices	797	13	Nuts (Various)	29,766	14

Article.	Weight Tons	Cwts.
Oils (Various)	1,306	1
Onions	7,768	5
Oranges	37,500	—
Orange and Lemon Peel	137	18
Pastry mixture	277	14
Peas	100	—
Pears	605	—
Potatoes	40	—
Pomegranates	444	—
Rice	4,599	9
Syrup	30	5
Sundries	1,980	19
Soups	1,636	16
Tea	5,036	5
Tomatoes	2,186	15
Tomatoes (Canned) ...	37	4
Tomato Juice	289	2
Tomato Puree	140	11
Tomato Sauce	283	10
Vegetables (Canned) ...	901	12
Wheat	324,542	—

Total Weight—642,767 tons, 4 cwts.

The following foodstuffs were found unfit and disposed of to the satisfaction of the Port Medical Officer :—

Article.	Weight. Cwts.	Qrs.
Apples	54	—
Apples	54	—
Bacon	7	2
Cheese	—	3
Custard Powder	3	—
Fruits (Canned)	44	—
Fruits (Dried)	176	3
Fruit Pulp	—	2
Fruit Juice	55	—
Fruit Cake	89	3
Flour	340	1
Fish (Canned)	—	2
Jams	4	1
Meats (Canned)	15	3
Maize	985	1
Milk Tablets	1	1
Meats (Pickled)	12	—
Onions	416	—
Pickles	1	—
Soups	9	3
Sauces	—	3
Tomato Paste	23	2
Tomato Juice	1	2
Tomato Soup	5	—
Tomatoes (Canned) ...	1	2
Vegetables (Canned) ...	44	2
Wheat	1,310	2

Total Weight—3,604 cwts., 2 qrs.
(*Note.*—24 cwts. were from ships' stores).

Foodstuffs Examined by City Analyst.

Article.	Fit for Human Consumption.	Unfit for Human Consumption or not in conformity with Regulations.	Remarks.
Apples	2	—	
Butter	7	—	
Condiments	2	—	
Corn Starch	1	—	
Cheese	4	—	
Christmas Pudding ...	2	—	
Citric Acid	2	—	
Custard Powder ...	1	1	Contaminated with river water—3 cwts. condemned.
Egg (Frozen) ...	2	—	
Egg Powder ...	1	—	
Fats (Various) ...	10	—	
Fish (Canned) ...	2	—	

FOODSTUFFS EXAMINED BY CITY ANALYST—*Continued.*

Article.	Fit for Human Consumption.	Unfit for Human Consumption or not in conformity with Regulations.	Remarks.
Flour	1	—	
Fruit Cake	1	—	
Fruits (Canned) ...	11	—	
Fruits (Dried) ...	15	3	1 sample contained Potassium Carbonate—4½ cwts. Raisins condemned. 2 samples contained an excess of SO_2.
Fruit Juice	3	2	Contained an excess of SO_2.
Fruit Pulp	1	—	
Fruit in Brine ...	4	—	
Gelatine	1	—	
Grape Juice	3	—	
Ginger (Preserved) ...	5	3	Contained an excess of SO_2.
Ham and Bacon ...	3	2	Contaminated with Copper Sulphate 7½ cwts. Condemned.
Honey	1	—	
Jams and Jellies ...	9	—	
Lard	3	1	Contaminated with Iron Oxide. 2 cwts. sent for re-conditioning.
Lemon Peel	1	2	Contained an excess of SO_2.
Margarine	1	—	
Meats (Canned, etc.)	6	—	
Milk (Canned) ...	1	—	
Oils	1	—	
Orange Peel	3	—	
Oranges	2	—	
Onions	1	—	
Pork and Beans ...	2	—	
Rice	—	1	Infested with grain weevil. 10 cwts. sent for re-conditioning
Sauces	5	—	
Soups	8	—	
Syrup	6	1	Contained vegetable debris. 137 drums returned to manufacturers.
Tea	2	—	
Tomatoes (Canned) ...	4	—	
Tomato Paste ...	10	6	Contained an excess of Copper Sulphate.
Vegetables (Canned)	14	3	2 samples contained Copper Sulphate—100 cwts. condemned but released for pig feeding. One sample was from ship's stores, where the tins were found to have been resoldered. 1¼ cwts. condemned and destroyed.

Food Insect Pest Disinfestation.—Six vessels were treated with H.C.N. in concentrations and exposures varying from 8 to 12 ounces

per 1,000 cubic feet and 8 to 15 hours respectively for the destruction of food insect pests at the request of the Department of Agriculture, Insect Pest Infestation Section. In five instances compartments other than those infested with insect pests but necessary to qualify for a Deratization Certificate were treated at the same time after which Deratization Certificates were granted, in the remaining instance disinfestation of the five holds and bridge space for the destruction of insects only, the cost of the operation being borne by the Department of Agriculture. A Deratization Certificate was not issued. A Deratization Exemption Certificate had been issued to the vessel two months previously and was therefore still valid.

Sanitation at the Docks.—There are seven canteens in the dock area. During regular visits to these premises it was found that all were maintained in a satisfactory condition ; similarly with factories within the area.

Cleansing of sanitary conveniences, roads, sheds, etc., was continued as in former years, and while these arrangements did not result in conditions of the highest standard they could be considered moderately satisfactory.

The arrangements for removing ships' refuse deposited in the roadways remains unsatisfactory and this problem will only be solved when a regular removal service is provided which will deal with all refuse irrespective of its origin or nature.

Complaints were numerous during the summer drought about offensive smells emanating from the River Clyde. River pilots, bringing vessels up river complained that the odours became apparent near Bowling and increased in strength and offensiveness as they approached docks. With the return of the rain in the autumn the river gradually returned to its normal colour and its well-known odour.

If the odours experienced during the drought period caused no injury to public health they certainly did provide an unpleasant reminder of the increasing pollution of the river to the point of saturation which, if not attended to soon, may prove to be a problem of some concern to public health authorities in the not too distant future.

CHARLES RANDALL,

Senior Port Inspector.

The following statement submitted by the Corporation Veterinary Surgeon indicates the work done under the Imported Food Regulations, during 1949 :—

EXAMINED.

Beef—	
Quarters	160,925
Cuts	2,227
Bags	97,249
Veal—	
Sides	27
Bags	21,898
Mutton—	
Carcases	119,341
Bags	8,809
Lamb—	
Carcases	431,786
Bags	4,478
Pork—	
Sides	41,990
Carcases	1,580
Bacon—	
Bales	9,727
Goats—	
Carcases	294
Poultry—	
Cases	19,549
Crates	7.018
Rabbits and Hares—	
Rabbits, Cases	10,111
Rabbits, Crates	69,000
Hares, Cases	36
Hares, Crates	696
Whalemeat—	
Bags	59,158
Fish—	
Tons	50
Offal—	
Ox Tongue, Bags	5,543
Ox Tongue, Roots, Bags	536
Ox Cheeks, Bags	616
Offal—	
Ox Hearts, Bags	3,491
Ox Livers, Bags	8,937
Ox Livers, Boxes	631
Ox Stomachs, Bags	863
Ox Kidneys, Bags	1,488
Ox Tails, Bags	1,219
Ox Skirts, Bags	329
Ox Sweetbreads, Bags	125
Ox Head Meat, Bags	52
Calf Tongues, Bags	1,755
Calf Hearts, Bags	806
Calf Livers, Bags	29
Calf Livers, Boxes	5,501
Calf Kidneys, Cartons	1,091
Calf Sweetbreads, Bags	41
Sheep Tongues, Bags	70
Sheep Hearts, Bags	1,062
Sheep Livers, Bags	35
Sheep Livers, Boxes	101
Sheep Kidneys, Bags	465
Lamb Tongues, Bags	654
Lamb Hearts, Bags	2,151
Lamb Livers, Boxes	12,715
Lamb Sweetbreads, Bags	39
Lamb Casings, Tierces	11
Pig Tongues, Bags	47
Pig Heads, Bags	481
Pig Hearts, Bags	367
Pig Livers, Bags	117
Pig Livers, Boxes	2,176
Pig Kidneys, Bags	116
Pig Casings, Tierces	8
Pig Maws, Bags	190
Goat Tongues, Bags	1
Goat Hearts, Bags	1
Goat Livers, Boxes	5
Goat, Kidneys, Cartons	1

CONDEMNED.

Beef—	
Quarters	3
Bags	8
Lbs.	113
Veal—	
Lbs.	5½
Trimmings, lbs.	35
Mutton—	
Carcases	2
Quarters	2
Bags	2
Trimmings, lbs.	115
Cuts	1
Lamb—	
Carcases	2
Lamb—	
Trimmings, Lbs.	102
Cuts	1
Pork—	
Bags	3
Rabbits—	
Crates	11
Offal—	
Ox Head Meat, Bags	1
Ox Hearts, Bags	1
Ox Liver, Bags	2
Calf Tongues, Lbs.	26
Whalemeat—	
Bags	1,511

SECTION VIII

HOUSING.

During 1949 the Corporation completed 3,633 permanent houses, to which has to be added the conversion of 330 requisitioned properties, making a total increase in dwelling accommodation of 3,963 houses.

The following table shows the number of houses completed during the last twelve years :—

1938	...	2,936	1944	...	484
1939	...	2,227	1945	...	572
1940	...	980	1946	...	1,891
1941	...	791	1947	...	3,052
1942	...	1,124	1948	...	3,105
1943	...	931	1949	...	3,963

At 31st December, 1949, the total number of houses provided by the Corporation since the commencement of local government operations was 70,744. The types of houses are shown in the following table :—

Ordinary Schemes	32,815
Temporary Houses	2,550
House Purchase Schemes	103
Intermediate Schemes	14,806
Rehousing Schemes	14,781
City Improvements and Other Departments	3,677
Requisitioned Properties	1,478
Scottish Special Housing Association	534
	70,744

In Circular D.H.S. 103/1949 the Secretary of State advised Local Authorities to reconsider their standard of housing production with a view to economies being made both by the local authority and by building contractors, with a view to the reduction of expenditure on housing. Generally it was recommended that the saving should be secured (*a*) partly by the building of a high proportion of houses of three apartments or less, and (*b*) partly by certain building economies which could be effected without detriment to the maintenance of proper standards of construction and accommodation.

Smaller Dwellings.—As has been stated elsewhere "the main defect in Scottish housing conditions in the past has been the building of houses which in terms of rooms per house have been inadequate both in themselves and in relation to standards which have been found practicable and desirable in England and Wales." Few of the houses

for the working class built in Scotland before 1919 had more than two apartments and even after 1919 the new rehousing schemes had as many as 75 per cent. of two-apartment dwellings. These small houses have led to gross overcrowding, the rapid spread of infection among children, and the complete absence of privacy. In England, however, the standard size of house is the four-apartment—the three-bedroom house—a phrase which emphasises the striking contrast which exists between the two countries. In Scotland, however, the living room has to be used as a bedroom in the majority of existing dwellings. This contrast is illustrated by the following table :—

GLASGOW—OCCUPIED HOUSES
1931.

Comparison with Liverpool and Manchester
Percentage Size of Apartments.

	Number of Apartments.					
	One	Two	Three	Four	Five & over	Total Houses
Glasgow ...	14·8	43·7	23·7	9·1	8·7	261,179
	58·5		32·8			
Liverpool ...	0·3	2·7	8·7	21·7	65·6	177,802
	3·0		31·4			
Manchester ...	0·2	1·7	10·0	39·9	48·2	180,359
	1·9		49·9			

The year 1931 was taken as it was a census year and included all houses, unlike the Overcrowding Census of 1935 which took into account only houses with rentals of £45 per annum or less.

It will be seen from this table that Glasgow in 1931 had 58·5 per cent. of one and two-apartment houses compared with 3 per cent. in Liverpool and 1·9 per cent. in Manchester, while of four-apartment houses Glasgow had 9·1 per cent., Liverpool 21·7 per cent. and Manchester 39·9 per cent. Houses of five apartments and over account for more than half the total number of houses in Liverpool and almost half the number in Manchester, while Glasgow had only one-twelfth of this size.

The overcrowding statistics of Scotland and of England illustrate the comparative differences in houses. In Glasgow 31 per cent. of all houses of £45 and under in rent were found to be overcrowded on the very low standard of occupancy adopted under the 1935 Housing Acts.

Manchester showed an overcrowding percentage of 2·1 and Liverpool, 7·4.

In the local authority building between the wars the same approximately relative percentage was maintained.

1919-1939.	Population.	Number of Dwellings Provided	Dwellings of Four Rooms and More (Percentage)	Dwellings of Five Rooms and More (Percentage)	Parlour-Type Dwellings (*i.e.*, Two Living rooms
Glasgow ...	1,128,473	50,289	27·8	3·05	·79
Liverpool ...	822,400	37,494	88·64	34·50	33·01
Manchester ...	727,600	30,991	83·42	21·48	21·14

For the fifteen years prior to 1945 Scotland had to use a standard of occupancy in its rehousing equal to the penal standards of the 1935 Housing (Scotland) Act which compelled the use of the living room as a bedroom in all new houses until four years ago. Under the 1944 standard of occupancy, which is the English standard of rehousing, a three-apartment house is suitable only for husband, wife and two children under the age of ten or of the same sex.

For tuberculous families one additional room is essential and even a three-apartment house cannot be utilised for tuberculous families if it exceeds three members and one of the parents is tuberculous.

It is true that some families recently rehoused tend to huddle together in the one room because of lack of furniture or the coldness of the bedrooms as compared with the former one or two-apartment house but the lack of furniture should not be a permanent obstacle and the coldness of bedrooms will become less apparent in time, at least in dwellings where the floors are of wood and where a coal fire is available. It is not expected that full use will be made immediately of more generous accommodation by tenants from small overcrowded homes but the result will be seen in the next generation. It is already apparent in the children rehoused in the years before 1930 who are now clamouring not for the one or two apartment dwelling that their parents started married life in but for a three-apartment modern house. In a recent survey of 46,000 local authority houses in England, the vast majority of four, five and six apartments, in only 10 per cent. of the houses was there a bedroom to spare.

During the review of the waiting list undertaken during the year by the City Improvements Department it was found that of the total number of families who had confirmed their desire to be rehoused, 75 per cent. were in need of three-apartment houses but in this estimation no allowance was made for sex separation or for family growth. It should, however be remembered that of the number of re-applications, over 33,000 families were homeless, living in lodgings or with relatives and no doubt restricting their family to either one

or two children owing to the circumstances in which they found themselves.

Up to December, 1949, Glasgow has provided 70,000 new dwellings, of which 57·2 per cent. are of three apartments, so that in order to retain some balance in the housing schemes now to be built not more than 35 per cent. of three-apartment houses should be constructed.

Under the 1949 Housing Act it is no longer necessary to build only for the working classes and in such large areas as Drumchapel and Castlemilk it is hoped to provide diversified communities. An economic rent will be more readily forthcoming if the houses are of four, five and six apartments.

Apart from the building of a greater number of houses of three apartments or less, recommended economies included the building of flats and terraces instead of cottage-type houses, a reduction in the height of ceilings, the omission of fireplaces in bedrooms, and reduction in the size of the third bedroom of four-apartment houses.

Flats and Terraces.—Glasgow has produced more than its fair share of tenement dwellings and the advice given in this paragraph by the Secretary of State has more significance for other local authorities.

Reduction in the height of Ceilings.—At the present time in Glasgow the customary height of ceilings in new tenements is 9 feet on the ground floor and 8 feet 6 inches on the upper floors, while in cottage or four-in-a-block type it is 8 feet 6 inches and 8 feet on the higher floor. Reference was made by the Secretary of State to the 8 feet ceiling which is incorporated in many of the non-traditional houses built in Scotland since the war but these houses were cottage or four-in-a-block types of dwellings not more than two storeys high and in view of the rather open development associated with this type of construction no objection can be taken to the ground-floor ceilings being 8 feet in height. In tenemental dwellings on the other hand no alteration is indicated in the present existing standard. The height of a window governs the degree of penetration of daylight and even a small reduction of 6 inches to 12 inches in the height of the lintel of a window will materially alter the amount of daylight reaching the ground floors and upper floors of a tenement. Many of the existing tenement properties, both local authority and private, show serious limitation of daylight penetration in the ground-floor and first-and second-floor houses. Reduction in the height of ceilings, therefore, in

tenement properties is not advisable. The reference to the accepted medical opinion of the lower ceiling applies only to ventilation where any height above 8 feet or 8 feet 6 inches does not add to the adequate ventilation of a room but no attention was paid to the effect of the height of the lintel of a window to the day lighting of an apartment.

The Omission of Fireplaces in Bedrooms.—Pre-war it was the custom in Glasgow to provide the first bedroom with a coal fire, the second with a gas fire and the third with a plug for an electric fire. In 1939 the Housing Committee were exercised over the problem of the heating and ventilation of bedrooms and a report was provided by the Medical Officer of Health at that time emphasising the necessity to install a flue for adequate ventilation, preferably a coal fire flue. This subject has received a considerable amount of study and the general opinion is as follows :—

> The ordinary chimney flue (81 square inches) even without a fire at its best is an efficient ventilator but the flue of smaller dimensions is far less effective. When one compares the coal fire and gas flues with wall ventilators it is found that, even with no fire alight, in general the two former are found to give greater ventilation than wall ventilators. When rooms are warmed up the ventilating effect of flues is increased but the wall ventilator is not materially affected. Wall ventilators are more affected by weather conditions than flues and are apt to cause unpleasant draughts which frequently result in their being blocked up. With a single wall ventilator and windows and doors closed, the minimum ventilation required for two persons (1,200 cubic feet) cannot be obtained with any practicable increase in the area of the wall ventilator. Irrespective of the method of heating there should be some adequate provision made for the ventilation of an apartment.
>
> During periods of economy it will not be possible to install coal fire flues in bedrooms but when conditions return to normal it will be worth while to consider again the installation of some form of flue in all bedrooms.

Reduction in Size of Third Bedroom.—It has been recommended that a four-apartment house with a single-person third bedroom would solve the problem of sex separation for a mixed family. The Scottish Housing Advisory Committee, however, in their report ' Planning Our New Homes ' went into the question of the size of the third bedroom and decided against any reduction in its size.

The deterioration in house property continues and an increasing number of buildings have to be condemned by the Dean of Guild as dangerous. The wastage of houses over the last five years, either by reason of the properties becoming dangerous or being condemned as unfit for human habitation, has been over 2,000. The details are shown in the following table :—

HOUSING, 1945-1949.

Houses represented as Unfit by the Medical Officer of Health or as Dangerous by the Master of Works.

	Medical Officer of Health			Master of Works	
Year.	Closing Order.	Demolition Order.	Total.	Dangerous.	Grand Total.
1945 ...	3	10	13	232	245
1946 ...	12	14	26	15	41
1947 ...	160	114	274	355	629
1948 ...	2	43	45	471	516
1949 ...	1	104	105	718	823
Total ...	178	285	463	1,791	2,254

While a limited number of properties can be condemned as unfit under the Housing Acts, it is still not possible to carry out any large clearance schemes although the possibilities of certain circumscribed areas are being reviewed at present.

During 1949 601 recommendations were made to the City Improvements Department under the scheme for the Rehousing of Tuberculous Families. Altogether 787 families were rehoused during the year, 243 being families recommended during 1949 and 544 families recommended in previous years. The high number of families rehoused during the year follows on a special allocation of houses to the local authority for this purpose.

NUMBER OF TUBERCULOUS FAMILIES REHOUSED, 1935-1949.

1935 ...	278	1942 ...	69
1936 ...	182	1943 ...	146
1937 ...	125	1944 ...	166
1938 ...	100	1945 ...	124
1939 ...	82	1946 ...	220
1940 ...	52	1947 ...	245
1941 ...	60	1948 ...	326
	1949		
	787		

Applications for rent restriction certificates under the Rent and Mortgage Interest Restrictions Acts, 1920-1939 amounted to 480 during

the year. The following table shows the number of applications from 1938 to 1949 :—

1938	...	35	1944	...	81
1939	...	29	1945	...	437
1940	...	3	1946	...	271
1941	...	8	1947	...	672
1942	...	3	1948	...	323
1943	...	51	1949	...	480

Of the 480 applications, 236 were granted, 243 refused, and 1 cancelled. There were 49 applications by house factors for reports, all of which were granted.

Statistics of decrowding in relation to houses vacated by families removed to new houses is shown in the table as follows :—

Decrowding Operations.

Condition of Vacated Houses since the Coming into Force of the Housing (Scotland) Act, 1935.

Size of House.	No. of Houses inspected.	Over-crowding removed.	Over-crowding reduced.	Over-crowding unchanged.	Over-crowding increased.
One apartment	6,925	5,177	1,437	192	119
Two apartments	16,761	13,313	2,510	434	504
Three apartments ...	5,072	4,535	315	77	145
Four apartments and up	676	594	42	10	30
Total ...	29,434	23,619	4,304	713	798
		80·3%	14·6%	2·4%	2·7%

Out of 29,434 houses inspected subsequent to the transfer of the occupants to Corporation houses since the passing of the Housing (Scotland) Act, 1935, 19·7 per cent. were found to be again overcrowded compared with 20·2 per cent. in 1948.

During the year 105 houses were represented by the Medical Officer of Health to the Housing Committee as uninhabitable.

Inspection of Housing Schemes.

(*a*) Condition as to Cleanliness.

The number of houses in the various rehousing schemes reported on is 14,769.

No. of tenants under supervision at 1st January, 1949 ...		14,736	
Of which evicted or left owing rent during 1949	45		
Of which left voluntarily during 1949	637		
		682	
Of which remaining at 31st December, 1949		... ...	14,054
No. of tenants obtaining entry during 1949		675	
Of which evicted or left owing rent during 1949	1		
Of which left voluntarily during 1949	—		
		1	
Of which remaining at 31st December, 1949		... ...	674
Total number of tenants remaining as at 31st December, 1949			14,728

During 1949 the nurse inspectresses made 66,671 primary visits, the condition of the houses being recorded at the time of the visits as " Clean " 41,854, " Fair " 23,537 and " Dirty " 1,280. Further visits numbering 2,175 were made to the less satisfactory tenants.

At the beginning of the year 14,736 households were under supervision and at the end of the year 14,728—a decrease of 8. The number of new tenants was 675. There were 682 removals or 4·6 per cent. of the total occupancies.

The changes in the condition of the 14,054 households under supervision throughout the whole year were as follows :—

	Condition at End of Year.				Group
	Clean.	Fair.	Dirty.	Totals	Percentages
Condition at Beginning of Year—					
Clean	9,104	301	3	9,408	67·0
Fair	515	3,958	29	4,502	32·0
Dirty	3	45	96	144	1·0
Total	9,622	4,304	128	14,054	100·0
Group percentages	68·5	30·6	0·9	100·0	—

A similiar table is given for the 674 tenants who obtained entry during the year and who were still resident in the schemes at the close.

Condition at date of Entry—	Condition at End of Year. Clean.	Fair.	Dirty.	Totals.	Group Percentages.
Clean	279	55	—	334	49·6
Fair	79	252	1	332	49·2
Dirty	2	1	5	8	1·2
Total	360	308	6	674	100·0
Group Percentages	53·4	45·7	0·9	100·0	—

The condition prior to the removal of the houses occupied by families who were evicted or left owing rent and by tenants removing voluntarily during the year is compared in the following table :—

	Tenants Evicted during 1949. No.	Group. Percentages.	Tenants Removing Voluntarily during 1949. No.	Group. Percentages.
Clean	18	39·2	470	73·8
Fair	22	47·8	165	25·9
Dirty	6	13·0	2	0·3
Total	46	100·0	637	100·0

Of 14,728 houses occupied at the end of the year, 9,981 were regarded as "Clean," 4,613 as " Fair" and 134 as " Dirty," representing 67·8 per cent., 31·3 per cent. and 0·9 per cent. of the total. The corresponding percentages for occupancies at the end of 1948 were 67·1 per cent., 31·9 per cent. and 1·0 per cent.

(*b*) Bug Infestation.

The total number of houses in which evidence of the presence of bed bugs was found was 157, or 1·1 per cent., as against 1·0 per cent. in 1948. This increase is insignificant. Analysis of this figure shows that only a " trace " of bed bugs was found in 27 houses or 0·2 per cent. which gives the same percentage as recorded in 1948. In this group of houses only old hatched eggs or bug casts but no living bugs or eggs were found in the beds or on furniture, pictures or other household belongings. In 41 houses or 0·3 per cent. compared with 0·2 per cent. in 1948, a " medium " degree of infestation was found and by this is meant that living bugs or eggs were found in beds or on furniture, pictures or other household belongings but not in the structure of the building itself. This condition is readily remedied by the tenants by applying the ordinary methods of household cleansing under the direction of the nurse inspectresses. In 89 houses or 0·6 per cent. compared with 0·6 per cent. in 1948, a " serious " degree of infestation was found. In these houses living bugs or eggs, or both, were found in beds, on furniture or on picture rails, skirting or door facings. Prior

to 1948 the eradication of bugs in these houses required the co-operation of the tradesmen of the Maintenance Section of the Housing Department whose procedure was to remove the infested woodwork from walls and apply the blow lamp directly or a contact insecticide. Since the establishment of the D.D.T. Disinfestation Unit, it has been found that the proper application of D.D.T. and Gammexane (" B.H.C.") is sufficient in itself to eradicate infestation of the wall structures without having recourse to the removal of woodwork for the purpose of disinfestation. It will be appreciated that this new procedure causes the minimum of upset in the house while achieving the same results. A feature of the work of the nurse inspectresses is the early detection of infestation and this has been very important in that it has prevented the vermin from establishing themselves for any length of time.

The table submitted herewith shows the progress made during the past sixteen years in the prevention of bug infestation which has fallen from 10·7 per cent. in 1934 to 1·1 per cent. in 1949. It should be noted that serious infestation has fallen during that period from 7·1 per cent. to 0·6 per cent. throughout the rehousing schemes. This progress is further proof that the preventative system which has been practised in Glasgow during the past sixteen years is thoroughly sound, as it depends for its success upon the cleanliness of tenants and the supervision of them by the nurse inspectresses who are specially trained in the work of prevention of infestation by the bed bug.

PROGRESS OF BUG INFESTATION PREVENTION IN REHOUSING SCHEMES.

Year.	Number of Houses Inspected.	Number of Houses in which Bed Bugs were found.				Percentage of Total Number of Houses.			
		Trace.	M.I.	S.I.	Total.	Trace.	M.I.	S.I.	Total.
1934 ...	8,670	104	210	612	926	1·2	2·4	7·1	10·7
1935 ...	10,576	218	368	378	964	2·1	3·5	3·6	9·2
1936 ...	12,803	220	296	295	811	1·7	2·3	2·3	6·3
1937 ...	13,676	253	165	304	722	1·8	1·2	2·2	5·2
1938 ...	14,416	138	69	240	447	0·9	0·5	1·7	3·1
1939 ...	14,609	79	62	168	309	0·5	0·4	1·2	2·1
1940 ...	14,669	55	75	185	315	0·4	0·5	1·2	2·1
1941 ...	14,731	51	65	94	210	0·3	0·4	0·7	1·4
1942 ...	14,751	34	61	121	216	0·2	0·4	0·8	1·4
1943 ...	14,769	25	51	120	196	0·2	0·3	0·8	1·3
1944 ...	14,769	21	26	110	157	0·1	0·2	0·8	1·1
1945 ...	14,769	31	21	108	160	0·2	0·1	0·7	1·0
1946 ...	14,769	33	23	105	161	0·2	0·2	0·7	1·1
1947 ...	14,769	30	21	131	182	0·2	0·1	0·9	1·2
1948 ...	14,769	35	28	83	146	0·2	0·2	0·6	1·0
1949 ...	14,769	27	41	89	157	0·2	0·3	0·6	1·1

Trace—Trace of Bugs. M.I.—Medium Infestation.
S.I.—Serious Infestation.

Control of Bed-Bugs and Cockroaches.

Report of Work carried out during 1949 *by the Disinfestation Unit.*

In the Annual Reports of the Medical Officer of Health for 1947 and 1948 reports have been made on the uses of D.D.T. (Diphenyl-Dichloro-Trychlorethane) and also of Gammexane (Benzene Hexachloride) and the disinfestation results obtained. The work has been continued on an even larger scale during 1949 by the addition of a 12 cwt. Bedford motor van to the transport of the Disinfestation Unit. There are six men employed on the work with the two vehicles for their transport.

It is still the opinion of the Supervisor of the Unit that a 5 per cent. water emulsion of D.D.T. made down from a 25 per cent. concentrate fulfils all the requirements for the treatment of infested dwellings. The water emulsion is applied by portable hand sprays or by spray-guns operated by a small petrol-driven unit fixed to the floor of the motor vehicle. The compressor can be readily detached from its mounting and carried by two men to wherever it is required.

Sanitary Division	No. of Bug-Infested Apts. Treated.	No. Of Apts. Treated for Tenants being Rehoused.	No. Of Cockroach Infested Houses Treated.	Total No. of Apts. Treated.	Total No. of Visits.
Eastern ...	777	327	170	1,274	2,007
Central ...	548	141	73	762	1,087
Northern ...	935	478	72	1,485	2,131
South-Eastern	587	480	87	1,154	1,504
South-Western	629	483	181	1,293	1,810
Total ...	3,476	1,909	583	5,968	8,539

The above table shows the amount of work which has been carried out in each sanitary division of the city. There were 3,476 apartments treated for bed-bug infestation during 1949 compared with 1,496 during 1948. Although a very considerable amount of bed-bug disinfestation of old dwelling-houses has been accomplished since the beginning of 1947 until the present date, there is ample evidence that bed-bug infestation is still very prevalent throughout the city. It is hoped, however, that cases of heavy infestation will become rarer in the near future. There have been very few recurrences of bed-bug infestation in treated houses.

In addition to the above table of work a number of catering premises in the city have been successfully treated for infestations by the greater and lesser cockroach. Some common lodging houses have been successfully treated for bug infestation.

Co-operation with the Scientific Advisory Council.—During 1949 a close co-operation was maintained with the Disinfestation Sub-Committee of the Scientific Advisory Committee of the Department of Health for Scotland. The Medical Officer of Health was asked by the Scientific Advisory Committee to arrange short courses of instruction on the uses of the synthetic insecticides for sanitary inspectors and others interested in insect pest problems in the Eastern region of Scotland. Invitations were sent by the Department of Health to local authorities in the East of Scotland to send their sanitary inspectors to a short course of instruction which was held in the Public Health Department here. There were two courses of two days each, namely, 10th and 11th October, and 24th and 25th October, 1949. Sanitary inspectors attended from Dundee, Edinburgh, Kirkcaldy, Perth, East Lothian and Fife. These courses of instruction consisted of lectures and demonstrations in the use of the modern insecticides.

Control of the House-Fly.

The idea that the house-fly (musca domestica) and its allies may be the means of spreading disease-causing organisms is an old one, and probably originated from the common observations on the filthy habits of these insects. A fly which breeds in excrement of all kinds, feeds and walks on it, and then enters a dwelling-house and feeds on human food-stuffs and settles on the human skin, is obviously a potential carrier of disease.

From practical experience the world over, there is no doubt that the house-fly does contaminate human food and the body with pathogenic organisms, and for this reason the house-fly and all allied species are regarded as a very serious menace to health. Proof exists that house-flies can become infected with such bacteria as the typhoid, paratyphoid, food-poisoning and dysentery groups of organisms and also with tubercle bacilli from sputum. Human faeces and expectorations may be seen everywhere with house-flies and other types feeding on them during the warmer months. Typhoid bacilli have been recovered from house-flies over three weeks after they had ingested the infected material, and similar observations have been made with other pathogenic bacteria.

The experience of medical officers all over the world overwhelmingly supports the view that where there are large numbers of house-flies and exposed human faeces, enteric fever, dysentery and gastro-enteritis are very prevalent. Sanitary Departments must therefore do everything possible to reduce and control the fly menace.

Prevention of fly-breeding is the most important means of control and this includes all measures which have a bearing on the hygienic cleanliness of the community. The most important of these measures are the activities of the Cleansing Department in the removal of garbage and household refuse from the immediate neighbourhood of dwellinghouses, shops and streets to the refuse destructors for incineration.

The female fly will deposit her eggs on any rubbish contaminated with faecal or other decaying organic matter, vegetable and animal, *e.g.*, horse manure, human faeces, decaying grain, rotten fruit, rotten vegetables, bread, rotten meat, kitchen refuse, expectoration, fishshop refuse and all this order of offensiveness. If these breeding facilities are not destroyed an enormous fly population during the warmer weather will be the result. In fact undiscovered breeding places may exist in any town or city of Scotland even during the cold months of the year, and this accounts for the occasional fly-infested house found during the winter. Such houses have been found in Glasgow as early as January of this year.

The rapid removal of breeding material should be carried out during the whole year. Flies unerringly find the neglected spots.

Sanitary authorities should become busy on fly-control early in the year and not wait until the warm weather arrives by which time the fly population has obtained a substantial start with its breeding and the increase thereafter is very rapid and great if unchecked.

The introduction of the insecticides D.D.T. and Gammexane has greatly facilitated the work of fly control, and it can be hoped that the proper use of these chemicals will favourably influence the incidence of intestinal diseases, particularly among infants and young children in the city.

Control in Glasgow during 1949.—At the beginning of April, 1949, the Health Committee authorised the Medical Officer of Health to

establish a Fly Control Unit within the Department and this unit, with transport, was in full working order by the beginning of May.

The unit consists of five operators, all comparatively young and active, and all have had some experience in the use of D.D.T. during their time in one or other branch of H.M. Services. One of the team acts as Driver of the van which they use as transport for themselves and materials. They have all attended a course of instruction on the life-history and habits of flies and on the nature and use of the more recently discovered insecticides, such as D.D.T. and Gammexane (Benzene hexachloride).

Material used for Spraying.—Each operator is equipped with a 2½ gallon hand pressure spray and a 2½ per cent. water emulsion of D.D.T. made down from a 25 per cent. concentrate mixed with whiting (1 lb. to each gallon) is used. The whiting is only an indicator of the parts which have been sprayed.

From the beginning of May onwards the walls of all the horse-manure pits in the city were sprayed first and when this part of the work was finished they started on the inside walls of the ash-bin shelters.

The wards of the city were taken in order of their infantile death rates and by the end of the year 319 horse-manure pits and 21,218 ash-bin shelters had been sprayed. The amount of material required for this work was 3,460 gallons of the 2½ per cent. D.D.T. Emulsion and 30 cwts. of whiting.

There are approximately 25,000 ash-bin shelters in Glasgow, and to cover this number the work of spraying is necessary throughout the year.

As is now well known, D.D.T. is very stable and stands considerable exposure to calm weather, and by repeating the spraying the D.D.T. fly-poisoning effect is steadily built up. It is hoped that the fly-control team may manage to cover the dungsteads and ash-bin shelters twice during 1950.

The effect on the fly population in 1949 cannot be given but authentic reports have been obtained which indicate a degree of freedom from house-flies and " blue-bottles " in places which, before spraying with D.D.T. had been tried, had suffered from considerable infestations. The effect of the work of the fly-control unit will take

some time to become positively apparent, but it is most essential that this useful work, still experimental, should be continued and intensified if possible.

Fish-mongers, butchers, and grocers can give valuable assistance in all anti-fly work by observing a high standard of hygiene throughout their premises. Accumulations of decaying materials should be avoided and they can readily develop a D.D.T. or Gammexane technique to suit their own premises and give valuable assistance to the efforts of the fly-control unit of the Health Department.

The Control of Cockroaches in Hospitals, Bakehouses and Premises where Food is Prepared.

"The cockroach, nowhere a welcome guest, quietly pushes on its conquests, and even the determined hostility of the tidy housewife does not avail to check its progress. Its nocturnal habits and love of concealment make it a very difficult insect to eradicate when once it has established itself in a house, and it is to be feared that no certain remedy for this nuisance has yet been discovered." This was written in 1893 in "Our Household Insects" by Edward A. Butler, B.A., B.Sc., London, and although considerable progress has been made in finding suitable remedies, the problem of cockroach infestation still remains with us.

The present memorandum is based upon what has been done in recent years to control infestation in some of the hospitals of Glasgow. The information it contains is also applicable to the control of cockroaches in bakehouses and premises where food is prepared.

The hospitals concerned are all large places and their design is most varied and complex and therefore when the problem of tackling the cockroach infestation of these institutions arose, it was seen that a very formidable task lay ahead. Some of the hospitals had long-standing contracts with insecticide firms, but the work under this arrangement was done very badly and the results were poor. It seems that, in general, the operatives of these firms had only a very superficial knowledge of the habits and life history of the insects they professed to exterminate and, in consequence, the nuisance continued.

Successful disinfestation for any insect pest demands a reasonable knowledge of its life history and habits, as well as a training in the selection and application of the most effective insecticides.

The two species of cockroaches which usually infest hospitals are the common cockroach or " black beetle " (Blatta orientalis) and the lesser cockroach (Blattella germanica). They are both extremely successful colonisers in hospitals and, in spite of all opposition, they have flourished and spread, and it seems that in many places the campaign against them has almost been given up or is only undertaken when a serious complaint is made by patients.

The synthetic insecticides D.D.T. (Diphenyl-Dichloro-Trichlorethane) and Gammexane (Benzene Hexachloride) when properly used against cockroaches have given splendid results and so far they have proved to be the best remedy for cockroach infestation.

Life History and Habits.

Blatta orientalis—Common Cockroach or " Black Beetle "—This is the species so generally well known. The male has well developed wings which cover about two-thirds of the dorsum of the insect's abdomen, whereas the wing structures in the female are rudimentary. The adults are almost black, especially the females, and they are about one inch long. The abdomen of the female is broader than that of the male. Both insects are swift and very difficult to catch. Breeding takes place all the year round, especially during the warmer months of the year. The female deposits her eggs in a capsule which contains sixteen individuals and the egg capsules or cases are laid in warm sheltered places, under hospital wards and in recesses of the heating ducts, under conditions which will be suitable for the young cockroaches when they emerge. Each female can deposit twenty-five or so of these egg capsules between April and September. Hatching takes place within a few days to several months, depending upon the temperature. The young can move about freely when they escape from the egg capsule which opens along the ridge when the embryos are fully developed. The usual number of these larvae is ten to a dozen.

Moulting.—The larvae moult immediately after leaving the egg capsule. They are then pale and nearly transparent. In a day or two they become brownish in colour. After an interval of about a month

the larvae moult for a second time. The third and fourth moults may each occur in six or eight weeks and the fifth and sixth in from three to four months. At the sixth moult the larvae become nymphs and now resemble the adult in all respects except that the wings and wing-cases are still rudimentary. By this time the insects, which may now be from about nine months to nearly a year old, are approaching the change into the perfect state ; the nymphs eat little, become retiring in their habits and seek dark sheltered places ; finally the skin splits longitudinally along the middle of the back and the perfect insect emerges. After the moulting of the nymphs the difference in the appearance of the sexes is apparent. Under less favourable conditions this period of development may be prolonged.

The Lesser Cockroach (*Blattella germanica*) *or "Steam Fly."*—This species is about half the size of the common cockroach, both the male and the female have fully developed wings but the female is broader and more squat than the male and is readily recognised by the fact that it is usually seen with its egg capsule protruding from the tip of the abdomen. It is lighter brown in colour than the common cockroach. There may be about forty eggs in each egg capsule. The larvae are quite active when they emerge and they are white in appearance which soon changes to dark brown within a few hours. Growth is rapid and the adult stage may be reached in about six months, during which time the immature cockroach moults seven times. The lesser cockroach prefers higher temperatures and damper surroundings than the common cockroach. Both types of cockroach damage food by soiling with their excreta.

Methods of Control.

It has been most noticeable that the more thoroughly clean the kitchens and heating ducts are kept, the lighter is the infestation in hospitals and other premises where food is prepared and stored. In fact, thorough cleanliness in itself is always our best protection against invasion by these insects, and even the small ant (monomorium pharaonis) may be kept in subjection by regular attention to repairs of walls and woodwork and to the observance of sound general hygienic principles.

Complete extermination of cockroaches has not been achieved in any of the hospitals in which the work of disinfestation has been reasonably carried out but the results have, in general, been very satisfactory and well worth while.

The best results have been achieved in the institutions in which the Superintendent, the Matron and the Clerk of Works have co-operated closely with the disinfestation operatives. In fact this has been the general rule in the hospitals where the work has been done on a large scale.

Perhaps the method of attack on cockroaches will be best appreciated from a description of the procedure as carried out in one of the largest and most heavily infested of the hospitals. In this hospital the infestation by both types of cockroach and crickets (gryllus domesticus) was gross and the subsequent results were excellent.

Inspection of Extent of Infestation.—A detailed inspection of the hospital is necessary before any insecticides are applied in order that a systematic plan of campaign may be devised.

The Clerk of Works co-operated in this initial inspection. He acted as guide through the heating ducts, kitchens, stores, laundry and the numerous ward kitchens. This in itself is a big task in a large hospital and it is a job for fit men only. It was found that the most heavily infested places were the large dining halls for patients, the adjoining serving kitchen and practically all the heating ducts of which there are several hundreds of yards. The inspections should be made at night as well as during the day time. Extraordinary numbers of both types of cockroaches and crickets in all stages of development were found and the breeding and moulting retreats located under wards and in recesses of the heating ducts.

Insecticide Powder.—The following well-known insecticide powder was at first used with very good results.

Sodium Fluoride	4 parts.
Boric Acid	1 part.
Pyrethrum Powder	1 part.

This is a quick killing powder but it has only a short period of maximum effectiveness and none of the durable " residual " effect of D.D.T. and Gammexane.

Night time was chosen for the work because the cockroaches and the crickets come out into the open and are mainly away from their shelters at this time. The insecticide was applied liberally by hand-

spread over the floors, behind radiators, under shelving and wherever the insects were present, or where they would seek shelter after their foraging. The operators wore gloves and gauze masks and precautions were taken to prevent contamination of dishes and food.

The initial kill was very great. The same locations were attacked again with the insecticide powder within a week and for this operation the Clerk of Works of the hospital had detailed a man from his staff. The work was continued systematically throughout the hospital and by the end of three months the nuisance had been almost completely eradicated. This man proved to have an unusual " flair " for this sort of work and he was subsequently employed in the supervision of similar work in other hospitals and also in the instruction of the men who were detailed for this special job. It is necessary to have men from the hospital staff trained in the work and always available.

Pyrethrum Kerosene Spray Insecticide.—In addition to the pyrethrum powder compound a liquid kerosene spray has been used with success against cockroaches. This is prepared by adding one half pound of pyrethrum powder to one gallon of kerosene, allowing the mixture to stand, and agitating it at intervals over a period of two hours or more, thus ensuring that practically all the active principle of the pyrethrum is dissolved. The residue of pyrethrum settles as a brown sediment and the clear pale yellow liquid is siphoned or filtered off. This spray, as well as the powder, has a quick " knock-down " effect which most people like to see, but little or no lasting or " residual " effect which is one of the most valuable properties of D.D.T. and Gammexane.

D.D.T.—Effect on Cockroaches.

The cuticle of the cockroach offers some resistance to the action of D.D.T. but within a comparatively short time the nervous system of the insect is affected and death soon follows. As a quick " knock-down " effect is not characteristic of the action of D.D.T. this can be accomplished by adding pyrethrum to the D.D.T. powder, and the kerosene extract of pyrethrum to a 5 per cent. kerosene solution of D.D.T. D.D.T. is soluble in kerosene to the extent of 5 per cent. and insoluble in water. Many insecticide firms are producing D.D.T. with pyrethrum added, but these mixtures add considerably to the cost of work which can be accomplished by D.D.T. or Gammexane alone. A

quick kill is impressive and most people look for this but the certainty of the paralysing and subsequently fatal effect of D.D.T. has given it pre-eminence among the insecticides used against cockroaches and crickets. It has been noted where the small ant (monomorium pharaonis) has added to the insect pest nuisance that the systematic application of D.D.T. has also kept it well under control.

Preparations of D.D.T. and Gammexane Recommended.

These insecticides may be used either in liquid form or as a powder. Their effectiveness depends entirely upon the skill and thoroughness with which they are applied.

The parts of the hospital where the cockroaches are present in greatest numbers should be treated first, and the less heavily infested areas later until the whole institution has been gone over systematically according to the plan drawn up following the initial inspections. All the work in kitchens and dining halls and even in the heating ducts should be done by night after the work of the day has ceased throughout the hospital and the insects have come out from their shelters. The ducts may be treated by day but better kills are obtained by dispersing the insecticides at night, for at that time the insects are more likely to be compelled to return over a treated surface and from even slight contact with this the cockroaches may pick up sufficient of the insecticide to cause death, which however may not occur for some days after the contact. It is usual to find cockroaches in a dying condition for some time afterwards owing to the " residual " effect of the D.D.T.

The insecticide powders now recommended for the control of cockroaches are (1) 5 per cent. to 10 per cent. D.D.T., (2) Gammexane Powder (D.034) and (3) Pyrethrum Powder added to either (1) or (2) in the proportion of four parts D.D.T. or Gammexane and one part pyrethrum powder.

There are efficient powder blowers to be obtained for a few shillings each. The operators when working in enclosed spaces should wear a protective surgical gauze mask over the nose and mouth to prevent inhalation of the insecticides.

Liquid preparations of D.D.T. and Gammexane have given highly satisfactory results in hospitals and cockroach infested houses. Pre-

ference is given to a 5 per cent. water emulsion of D.D.T. prepared from a 25 per cent. concentrate specially evolved by Geigy for dilution with water and this preparation has been found to be the most efficient and most economical of all when properly applied. Gammexane liquid spray L.044 is prepared by I.C.I. and it also gives good results. The liquid preparations are applied by means of portable pressure sprays with a capacity of two or three gallons.

Whatever insecticide or combination of insecticides is used, it is necessary to employ a member of the staff to carry out the work as a regular duty ; in the larger hospitals two or three men may be required to do the work well and it is advisable to have two men on the work in the heating ducts and under the wards.

Large hospitals should train their own staff to carry out this work but every large city will require to rely on the staff of their Public Health Department for advice and assistance in smaller institutions and other premises.

SECTION IX

BACTERIOLOGICAL LABORATORY.

In the year under review, 1949, the Corporation Bacteriological Laboratory attained its jubilee. For fifty years it has given service to the medical practitioners of the city, the hospitals and to the Medical Officer of Health and his assistants. It is fitting, therefore, that a short account of its origin and progress should be given.

The seed was sown in 1895 when a room in the Sanitary Chambers was set apart to be equipped as a laboratory, but flowering was delayed until 1899 when the service was inaugurated by the appointment of a whole time bacteriologist. This marks the real beginning of the laboratory. At first every medical practitioner in the city was invited to use the resources of the new laboratory for help in the diagnosis of doubtful cases of infectious disease, and suitable equipment was made available for the transport of specimens by post or messenger. There was an immediate response, which demonstrated the need for such a service at that time, and since then, year after year, the demands upon it have increased. There was rapid development in connection with general Public Health administration, not entirely on the purely medical side, but also embracing the needs of other Corporation departments in which bacteriology had some practical bearing. Thus the milk and water supplies of the city came under survey, the public baths, and even the horses of the old Tramways Department when glanders attacked them. When plague appeared in the city in the autumn of 1900, the laboratory played its part in the investigation.

By 1902 facilities for carrying out the biological tests necessary in much bacteriological work were secured by the provision of an animal house. In 1904, to meet the growing needs of the laboratory, two additional rooms were added, and with this accommodation the work was carried on for some years. Later, when the Municipal Buildings were extended, a new laboratory was constructed above the main building, covering an area of over 5,000 square feet and comprising five laboratories with necessary anterooms, preparation rooms and annexes. A new biological laboratory was also constructed in a

detached situation on the same level. This new laboratory was occupied in 1923, and from then until the present day the increasing volume of work constantly pouring in has there been dealt with. A feature of the department is its excellent reference library.

In 1944 further small structural alterations and additions were made and much new equipment provided to meet up-to-date requirements.

The steady increase in the number of examinations made indicates the growth of the Public Health Services no less than the increasing development of bacteriology in the diagnosis and control of infectious disease, and is also a measure of the appreciation by all concerned of the valuable facilities accorded by a progressive bacteriological service.

The number of specimens examined in 1900 was 1,319. Ten years later the number was about five times as large. In 1919, after twenty years, almost 20,000 specimens passed through the laboratory. In another twenty years, by 1939, that figure was more than doubled at over 40,000, and this high figure was again more than doubled by 1948 in which year the record number of 95,851 examinations were done. In a period of temporary high pressure recently, examinations have been carried out at the rate of over 100,000 a year.

At all times during the existence of the laboratory, apart from dealing with a constantly growing volume of routine work, members of the staff have been fully alive to the advances in bacteriology and by the trial and appraisement of modern methods have contrived to keep pace with the growth of microbiological science, and to bring the latest approved methods into daily use. Beyond this, bacteriological and epidemiological research has always been a feature of the laboratory's activities, and has resulted in the publication, from time to time, of many valuable and informative scientific papers.

The work of the laboratory during the year 1949 proceeded on the usual lines in relation to health administration and the diagnosis, control and prevention of disease. Early diagnosis of infectious disease, the investigation of contacts, the determination of cure, the examination of suspected food, the bacteriological control of the milk and water supplies, provide information which facilitates the administrative procedure of the Medical Officer of Health and materially helps the

medical practitioners and the medical officers of hospitals and clinics. Also, efficient bacteriological service is, incidentally, for the greater benefit of the patient who is ever the most important person, and should always be so considered, in any medical investigation.

The summary made in this report provides continued evidence of the extensive use made of the activities of the laboratory in the elucidation of the causes of disease. Many of the examinations conducted require extended work by the most up-to-date methods, and are time consuming if helpful reports are to be given. The aim of the laboratory is, as it has always been, to elucidate the problem put to it in the light of the increasing knowledge of what these problems involve.

The total number of examinations made in 1949 was 88,014, somewhat fewer than in the previous year, but this diminution is more than accounted for by the welcome fall in the incidence of diphtheria among the population and by the smaller number of tests required in relation to venereal disease. The bare number of tests done, as before, excludes a number carried out to investigate new methods and to improve those already in use. Altogether the laboratory has had a busy year.

Apart from the work done for the City of Glasgow, the laboratory has recently undertaken, by arrangements made between the Medical Officer of Health and the Western Regional Board, and as an emergency measure only, bacteriological investigations for the outside authorities of the Counties of Stirling and Clackmannan. This work began on November 1st, 1949, and is chiefly concerned with the requirements of Public Health administration of these areas, i.e., relating to the control of infectious disease, the needs of Venereal Disease clinics, and some biological control of milk supplies, etc.

Infectious Disease—Epidemiological Investigations

Diphtheria.—During the year 7,318 swabs were examined for the presence of the diphtheria bacillus, a sensible fall from the number examined in 1948 which was 10,984. This fall reflects the diminution of this disease among the population, to which the intensive immunisation campaign has contributed in no small measure, albeit there may be other factors at work. The decrease was chiefly among the suspected cases which numbered 6,286 against 9,422 in the previous year. The number examined for control purposes was 1,082 against 1,562.

The number of positive specimens from new cases showed a decrease of over 44 per cent. at 220; last year's figure being 397. Typing of all strains of *C. diphtheriae* isolated (448) was continued, and virulence and toxigenicity tests were carried out as required. All were examined for toxin production and many by the biological test. Of the 220 from new cases, 46 were classed as *gravis*, 41 as *intermedius*, 86 as *mitis*, and 47 as atypical. The table printed last year is added to, and well shows the total decline and the type variation over the last five years.

Year	Total No. of Strains	Gravis		Intermedius		Mitis		Atypical	
		No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
1945 ...	1,351	666	49·3	436	32·2	181	13·4	68	5·1
1946 ...	973	447	45·9	214	22·0	194	19·9	118	12·0
1947 ...	389	136	35·0	59	15·1	119	30·6	75	19·3
1948 ...	397	122	30·7	54	13·6	142	35·7	79	19·8
1949 ...	220	46	20·9	41	18·6	86	39·1	47	21·4

The decline in the more dangerous types has continued; there is a drop in these of about 5 per cent. Of the *mitis* and atypical strains, 92 were non-virulent and non-toxigenic, which leaves only 128 virulent strains of *C. diphtheria* isolated during the year; less than half the number in 1948, when there were 267. Again there is an increase of atypical strains, all of which proved non-virulent, and the number of the non-virulent variety of the *mitis* type was more than half of the total of that type which were isolated.

There has, indeed, been a spectacular fall in the incidence of diphtheria since the morbidity of this disease reached its greatest height in recent years with 5,190 cases at the crest of the wave in 1940, when the rate per million of the population was the highest ever recorded in Glasgow, and there were over 200 deaths. It is of interest to note that the very marked fall in the general incidence of diphtheria has coincided with a decreasing proportion of *gravis* strains in particular, and to a lesser extent of the *intermedius* type.

Typhoid Fever.—Typhoid fever was practically non-existent in the city last year according to the findings in this laboratory. Although examination for the enteric group of micro-organisms was asked for 386 times, in only 3 instances was the typhoid bacillus initially isolated. For purposes of control and clearance 516 examinations were done with 50 positive results. Some of these were from known carriers of *B. typhosus*.

Paratyphoid Fever. B. paratyphosus B (*Salmonella Schottmulleri*) was isolated from only three patients during the year.

From workmen employed around waterworks, 205 specimens were routinely examined to eliminate any possible source of infection by enteric organisms. All these proved to be negative. Blood from these persons was also examined, but no indication of infection or of the carrier state was found.

Dysentery (*bacillary*).—Although there was some falling off in the incidence of dysentery measured by this laboratory's records in the first five months of 1949, there was again a rise in the second half of the year. Altogether, 9,057 specimens were examined from suspects or for purposes of control. The total number of positive stools was 1,633. The maximum incidence occurred in August when dysentery bacilli were isolated from 144 new cases. The total for the year was 876 which is the highest number for many years.

B. dysenteriae Sonne was recovered from 501 patients which is 67 more than in 1948 ; *B. dysenteriae Flexner* from 373 patients or 10 less than in the year before ; *B. dysenteriae Newcastle* and *B. dysenteriae Schmitz* were each found once.

After six years of moderate incidence from 1938 to 1943 there was almost a four-fold increase for two years and then for two years a fall-back to the earlier moderate figure. In the past two years, however, the numbers have again greatly risen.

The following table of isolations of the various types of dysentery bacilli since 1938 is enlarged and shows the relative fluctuations during that period according to the findings from specimens sent to the laboratory.

Year.	Sonne.	Flexner.	Newcastle.	Shiga.	Schmitz.	Total.
1938 ...	113	23	2	—	—	138
1939 ...	26	65	—	—	—	91
1940 ...	72	107	—	—	—	179
1941 ...	54	57	1	—	—	112
1942 ...	72	61	1	—	—	134
1943 ...	182	70	2	2	—	256
1944 ...	498	273	75	2	1	849
1945 ...	473	139	247	1	—	860
1946 ...	111	109	49	—	—	269
1947 ...	66	18	21	—	—	105
1948 ...	434	383	3	—	—	820
1949 ...	501	373	1	—	1	876

It will be seen that in 1945 especially the numbers were swollen by the prevalence of the *Newcastle* bacillus. In the last two years, however, the high figures are due almost entirely to the prevalence of *Sonne* and *Flexner* dysentery, the common types in Britain.

Dysentery (*amoebic*).—Ninety specimens, many from returned service people, were examined for *Entamoeba histolytica*, but all findings were negative. A few non-pathogenic amoebae were seen.

Food Poisoning and Foodstuffs.—Outbreaks of food poisoning, large and small, have been reported more frequently in Britain during the last few years, and more Salmonella bacilli of food-poisoning type were isolated in 1949 in the laboratory than ever before.

Twenty-one samples of foods to which illness might have been imputed and 905 specimens from patients were examined. Many of the specimens from patients were repeats for control, and from contacts. In addition, 40 samples of foods, including tinned meats, sausages, brawns, cooking fats and sweetmeats were tested for bacterial contamination. Most of the patients investigated were cases of sporadic infection, though in connection with an outbreak of gastro-intestinal illness in the Western Infirmary 569 specimens were examined and *Salmonella typhi-murium* was isolated 129 times from 22 patients. Apart from this, the same organism was found 99 times in excreta from 51 affected persons in the city. Salmonella bacilli were never isolated from the foods sent for examination, but proteus bacilli (*Proteus vulgaris*) which have occasionally been arraigned as a cause of transient illness were found two or three times, and *Staphylococcus aureus*, some strains of which produce a toxin causing enteritis, was found in some cooked peas, and in a sample of dried milk. These foods were probably infected by persons in the households concerned.

Altogether food-poisoning organisms were isolated from patients 251 times, and comprised *S. typhi-murium*, 228 isolations (from 73 patients), *Salm. Montevideo* 2, *Salm. thompson* 9, *Salm. bovis morbificans* 7, and *Salm. newport* 2; in each case from one patient only. The remaining three were *Salm. schottmulleri* already recorded under Paratyphoid Fever.

Some of the meat samples examined for fitness for consumption were grossly contaminated and showed high bacterial counts, but no frankly pathogenic micro-organisms were found.

Venereal Diseases.—The year's record of examinations shows a decrease of 4,634 at 39,181. The figure for 1948 was 43,815. This is a major decrease that was not unexpected. The tests for syphilitic infections numbered 35,714 and for gonococcal infections 3,467. The Wassermann test was performed 7,930 times for diagnostic purposes, 7,935 times for the estimation of progress in cases under treatment, and 625 times on miscellaneous cases and to check doubtful results obtained by other tests.

The Kahn test is used in the laboratory as a complement to the Wassermann test, and the precipitation (Laughlen) test as a preliminary screen test mainly in routine ante-natal investigations.

Gonococcal culture was again carried out routinely by the use of the laboratory transport medium which ensures that the organisms are viable on arrival. From 662 cases, 2,134 specimens were examined chiefly from the City V.D. Clinics for female patients. About two-thirds of these were for diagnosis and the remainder for " test for cure ". Positive cultures numbered 183 against 218 last year. Sixty-nine of these confirmed the microscopical findings of previously positive or suspicious clinic smears, and from 113 patients the gonococcus was grown when the previous clinic smear had been found negative. In addition, in one instance, the organism was isolated from urine. Materials from 15 patients where the clinic smear had been regarded as positive, proved negative on culture.

Trichomoniasis.—All the above specimens (2,134) from women were examined for *Trichomonas vaginalis*, which is also maintained alive and active by the carrying medium. This flagellate was found in 489 patients, an incidence of 22·9 per cent.

Ophthalmia Neonatorum.—As usual a large number of specimens from infected eyes were examined, 423 in all, including 16 by cultural methods. Only 2 were found positive for the gonococcus—in both smear and culture. Of 14 cultures in which gonococci were not found, 3 yielded the meningococcus.

Public Health—General Control.

Antenatal—Rh Tests.—This service, run by the laboratory with the co-operation of the Maternity and Child Welfare Department and the Regional Blood Transfusion organisation, had completed by the end of 1949 the screening of 39,843 specimens of blood for the determin-

ation of the Rh factor. Of these, 10,772 were examined in 1949, when 26 women were found to have become sensitized to the Rh factor during pregnancy. The total of the Rh negative women discovered among the population examined from the initiation of the service in 1946 up to the end of the year was 6,307, representing a percentage of 15·8. The actual number of Rh negative bloods found in 1949 was 1,778.

Most of the specimens sent to the laboratory come from Ante-natal clinics, but it is to be noted with satisfaction, that general practitioners are beginning to use the facilities provided and sent 273 requests for testing during the year. All women found to be Rh negative by the laboratory screen tests have their blood examined by the Blood Transfusion Service for the presence of antibodies which indicate sensitization.

Tuberculosis.—The number of specimens of sputum examined numbered 7,390, an increase of 138 on 1948; in 1,531 of these the tubercle bacillus was found.

A few specimens of sputum, together with much other suspected material, urine, cerebro-spinal fluid, pleural fluid, gastric washings, etc., were reported upon by the biological test as well as by microscopical examination. In all 420 samples of morbid material other than sputum were examined.

Milk Supply.—Samples of milk to the number of 604 were tested biologically for tubercle bacilli during 1949, including 79 from outside authorities; a total increase of 73. Tubercle bacilli were detected in the city milk supply in 0·9 per cent. of 316 undesignated samples. That is, 3 tuberculosis samples were found in 316 examined, against 1 in 347 in 1948, when the percentage was 0·28. The present percentage of 0·9 is still an improvement on 1947. The average for the past three years works out at just under one per cent. for over a thousand milks examined. This shows a great improvement on the years 1937-1946.

Among designated milks, 113 of which were tested, only one proved to be tuberculous; a percentage of 0·88 against 1·02 in 1948.

In addition, 72 samples of the milk supplies to schools and 24 hospital samples were all found to be free from infection with *M. tuberculosis.*

From other local authorities 79 samples of milk were received for biological test, none of which was tuberculous.

The milk supplies of the city, including those sent to schools and hospitals, were examined routinely for bacterial count and by the coliform test. In all, 2,156 samples were examined. Of 1,602 specimens of designated milk tested in this way during the year, 1,394 (87 per cent.) complied with the regulations governing the standards for such milk. The following table gives particulars.

	No. of Samples.	No. Complying.	Per cent. Complying.
Hospital Supplies—			
Raw. (Certified, T.T., Standard)	250	206	82·4
Pasteurised and Heat Treated ...	83	70	84·3
Public Supplies—			
Raw. (Certified, T.T., Standard)	464	381	82·1
T.T. (Past.), Pasteurised, Heat Treated	644	591	91·8
School Supplies—			
Pasteurised	161	146	90·7

In addition to the above, 554 samples of raw milk were taken for examination prior to sale or to processing. Of these, 501 (90·4 per cent.) were satisfactory.

To control the efficiency of the cleansing of milk bottles by the various procedures in use, 256 were examined and 191 (74·6 per cent.) proved satisfactory.

Ice-cream.—There was a large increase in the number of samples of ice cream tested for bacteriological purity during the year. Though no official standard exists at present, the 335 specimens examined, classified according to bacterial count per ml., gave the following results :—

Bacterial Count per Ml.	No. of Samples	Percentage
0— 30,000	222	66·3
30,000— 100,000	38	11·3
100,000— 200,000	11	3·3
200,000—1,000,000	30	9·0
Over a Million	34	10.1

This table shows that 66·3 per cent. conform to a high standard for this product according to bacterial content ; and 80·9 per cent. may be regarded as satisfactory. Coliform organisms were present in 1/100 ml. in 56 samples, an incidence of 16·7 per cent. in the number tested.

City Water Supply.—606 samples from the reservoirs and other sources were examined during the year. The average bacterial counts in the water supplied to the mains is shown in the following table.

Supply	No. of Samples	Average Count per Ml. at 37°C.	Average Count per Ml. at 22°C.
Loch Katrine	153	5	30
Gorbals	55	10	15

In 2 samples only of the Loch Katrine supply, typical *B. coli* were present in 10 ml., and in one other sample they were present in 50 ml. From the Gorbals supply, *B. coli* was found now and then, but not in quantities of water less than 50 ml. The general standard is high.

Public Baths Water.—The results of examinations of 260 samples of water from the swimming ponds of the city were communicated to the Baths Department for their information and guidance. These on the whole were satisfactory, and confirmed the efficiency of the purification methods in use.

Again, extra samples (50) were examined specially to control the "break-point" chlorination method of treating the bath water.

Shellfish.—Six cockles from each of two samples were examined for contamination. Neither sample showed evidence of harmful pollution.

Anthrax.—Sixteen samples of goat and cowhair, and 8 of hides coming through the Port were examined biologically for the Anthrax bacillus. Results in all specimens were negative. In connection with a suspected case, floor sweepings and a hair-brush were also investigated. No evidence of the presence of *B. anthracis* was obtained.

Plague.—Examination of various species of rats from the harbour and adjacent buildings and from ships were conducted routinely as in previous years. In all, 486 rats were examined for evidence of infection with *B. pestis*, with negative results.

Original Investigations.

Diphtheria.—The use of the plate serum toxin technique for testing the toxigenicity of strains of *C. diphtheriae* has been continued throughout the year. Over 500 strains have now been examined by this method and the results over a long period with carefully performed tests are on the whole in remarkable agreement with the virulence of strains as determined by the biological test.

More work on the haemolytic properties of strains isolated in this laboratory has been carried out.

Streptococci.—Work has begun on the evaluation of a new method of extracting from streptococci the substance responsible for the success of the Lancefield precipitation test for the differentiation of streptococci. This work is directed to the confirmation of the claim that something can be obtained from the growth products of *Streptomyces albus* which can be used to treat streptococci to produce extracts which gives precipitin reactions with group antisera.

Dental Caries.—In collaboration with the Chief Dental Officer an investigation of dental caries in children has been started. This entails the examination of saliva for its content of *Lactobacillus odontolyticus* before and after treatment of the teeth by a special method. The saliva is examined by two bacteriological methods and so far 128 tests have been made on children before the commencement of treatment directed to the arrest of dental decay.

Other investigations are in progress aimed at the improvement of routine methods employed in the laboratory; for example—the staining of tubercle bacilli.

Hartley S. Carter,

Bacteriologist.

Publications.

Note on the Recognition of Toxigenic Strains of *C. diphtheriae* in vitro. H.S. Carter & W. Wilson (1949). Glas. Med. J. XXX. 43.

Control of Contaminant by adjustment of Environment. Jean L. Young, R. D. Stuart and W. Wilson (1949). J. Path. Bact., LXI. 141

Medicine and Literature. H. S. Carter (1949). Glas. Med. J. XXX. 144.

Summary of Examinations for the Year 1949.

City of Glasgow. Infectious Diseases.

		Positive	Total
Diphtheria and General Throat Infections—			
Diphtheria ...	Suspects ...	176	6,236
	Control ...	220	1,082
	Typing ...	—	448
	Virulence ...	—	129
	Toxigenicity Tests ...	—	240
Streptococcal Infections ...	Suspects ...	248	757
Gastro-Intestinal Infections—			
Enteric Fever ...	Suspects ...	3	386
	Control ...	50	516
	Water Works ...	—	205
	Specimens from ship	—	7
Food Poisoning ...	Foodstuffs ...	—	21
	Specimens from patients	251	905
	Shellfish ...	—	12
Dysentery—			
Bacillary ...	Suspects ...	876	3,844
	Control ...	757	5,213
	Amoebic ...	—	90
Other Forms—	Giardia, etc. ...	—	51
Tuberculosis	Sputa	1,531	7,390
	Other Specimens ...	—	420
Venereal Diseases ...	Wassermann Test ...	—	16,464
	Precipitation Test ...	—	12,837
	Kahn Test	—	5,882
	Gonococcal Smears, Cultures and Complement Fixation ...		3,044
	Colloidal Gold Test		314
	Protein Tests		217
	Opthalmia neonatorum		423
Miscellaneous Examinations—			
	Blood : Rh Factor		10,772
	Blood		89
	Body Fluids		240
	Exudates		55
	Excretions		12
	Vincent's organisms—swabs		292
	Trichomoniasis		2,134
	Worms for identification		23
	Insects for identification		5
	Anthrax—Hairbrush, floor sweepings		3
	Carry forward		80,758

SUMMARY OF EXAMINATIONS FOR THE YEAR 1949.—*Continued.*

Brought forward		80.758
CITY OF GLASGOW. GENERAL PUBLIC HEALTH.		
City Milk Supplies		2,324
Hospital Milk Supplies		357
Milk Bottles, ice cream, etc.		608
Water Supplies—routine		606
Water—extra specimens		115
Baths Department		260
Bath Waters—extra specimens		50
Foodstuffs—fitness for consumption		40
PORT HEALTH AUTHORITY—		
Anthrax—Hair 16, Hides 8		24
Foodstuffs examined for fitness for consumption		10
Plague—Rats		486
EDUCATIONAL HEALTH SERVICE—		
Dental caries investigation—examination of saliva		128
H.M. & ALLIED FORCES—		
Venereal Diseases		26
Diphtheria		7
Tuberculosis		2
OUTSIDE AUTHORITIES—		
Diphtheria		17
Tuberculosis		11
Enteric Fever		3
Dysentery		1
Urine for organisms		3
Milks		72
		85,908
STIRLINGSHIRE—		
Sputum, etc. for Tuberculosis	271	
Faeces, etc., for Dysentery, Enteric organisms, etc.	1,354	
Swabs for C. Diphtheriae, Streptococci, etc. ...	188	
Various specimens for organisms, etc.	33	
Venereal Diseases	122	
Milks	7	
		1,975
CLACKMANNANSHIRE—		
Sputum, etc. for Tuberculosis	99	
Faeces, etc. for Dysentery, Enteric organisms, etc.	6	
Swabs for C. Diptheriae, Streptococci, etc. ...	9	
Various specimens for organisms, etc.	11	
Venereal Diseases	6	
		131
		88,014

CONTROL—Specimens from hospital cases, contacts, etc.

SECTION X

FOOD POISONING.

During 1949, there were 44 notified outbreaks of acute illness thought to be due to the consumption of food. The total number of cases was at least 258, of which 3 died. The corresponding figures for 1948 were 15 outbreaks and 72 patients with one death.

The numbers affected in each outbreak showed the following distribution :—

1	patient	19	outbreaks.
2	patients	4	,,
3	,,	4	,,
4	,,	5	,,
5	,,	1	outbreak.
6	,,	2	outbreaks.
7	patients	2	outbreaks.
8	,,	2	,,
9	,,	—	,,
10	,,	1	outbreak.
24	,,	1	,,
100 or more	,,	1	,,

Thus, in 43 per cent. of the outbreaks, the incident was limited to a single patient. The largest outbreak involved a number of schools and the exact number of cases could not be determined. In 1948, a single case occurred in 8 outbreaks out of 15 and the greatest number of patients in any outbreak was 40.

Seasonal Distribution.—There was one outbreak in each of the months January, February, March, April and December. There were 4 in May, 6 each in June, July and August, 9 in September and 8 in October.

Types.—Classified into the two broad types specific and non-specific according to causal agents, the outbreaks showed the following features :—

1. *Specific Group.*—In 26 outbreaks, comprising 70 patients, the illness was associated with a Salmonella organism. In 23 of these, S. typhi-murium was isolated. In the remaining 3, the organisms found were S. newport, S. thompsoni and S. bovis morbificans, the last of these especially being a rare cause of illness in Glasgow.

The largest outbreak in this group originated from a patient admitted to a general hospital, the total cases numbering 24 of whom 3 died. The distribution of the 70 patients was 1 in 18 outbreaks, 2 in 3 outbreaks, and 3, 4, 7, 8 and 24 respectively in the remaining five outbreaks.

2. *Non-Specific Group.*—In the remaining 18 outbreaks, comprising at least 188 patients, no specific organism was isolated, and the causal agent was considered to be a toxin. This group included the largest single outbreak in which the number of persons affected was computed to be at least 100, but since the illness was very mild and transient and affected mainly the children in several schools, the cases may have numbered many more. The distribution of patients in this group was 1, 2, 5, 7, 8, 10 and 100 respectively in 7 outbreaks, 3 in 3 outbreaks, 4 in 4 outbreaks, 6 in 2 outbreaks and 9 in 2 outbreaks.

Vehicle.—In the majority of the outbreaks, the culpable medium remained undetected, and in this respect there is an almost exact correspondence with the two main types.

1. *Specific Group.*—In all 26 outbreaks associated with Salmonella organisms, no foodstuff could be incriminated and the origin of the infection was not discovered. The main reason for this may be the usual loss of time between the occurrance and the notification of the illness, but it is increasingly evident that in many instances, infection by these organisms may take place by case-to-case spread either direct or by a medium other than food, in the same manner as dysentery. This was especially noticeable in the hospital outbreak previously mentioned. Further evidence is found in those Salmonella infections which occur in young infants fed on dried milks either alone or supplemented with infant cereals.

2. *Non-specific Group.*—In 17 of the 18 outbreaks in this group it was possible to name the probable vehicle of infection. The foodstuffs incriminated or suspected along with the number of outbreaks in which they were involved, were as follows :—Beef (4), mutton (3), tongue (3), prepared stock (2—one mutton, one pork), corned meat (1), tinned ham (1), imported rabbit (1), tinned peas (1), and, probably whole rice (1). In all cases except those of the corned meaf and tinned peas, the food was kept at room temperature for 1 to 3 days before it was ultimately eaten. In 3 instances (mutton once and tongue twice), the incriminated food was finally served in sandwiches. From the few specimens of foods obtained for examination, suggestive organisms isolated were either staph. aureus or staph. albus, in both cases coagulase-negative.

Selected Outbreaks.—The following short descriptions illustrate the outstanding features of some of the 44 outbreaks.

1. *Specific Group.*—One feature of this group was the number of young children affected singly. Of the 19 outbreaks limited to one person, seven were related to children aged respectively 4, 6, 6, 8, 10, 15 and 18 months. No associated cases were detected in their families. The four youngest of these were fed on dried milk foods either alone or supplemented with the infant cereals in common use.

The largest domiciliary outbreak occurred in a family in the Northern Division consisting of 8 persons whose ages ranged from 40 to 2 years. One member exhibited diarrhoea only, while 2 others had headache, pains in the limbs, pyrexia and diarrhoea. The remaining 5 had no symptoms. The faeces of all members proved positive for S. typhi-murium. On the day before the sickening date, the family had picnicked on sandwiches which were said to taste peculiar and were only partially consumed though none had been retained for examination. They had been stored overnight in a cupboard showing distinct evidence of mice infestation.

The largest outbreak was associated with two wards forming a surgical unit of a general hospital. It appears to have originated from a male patient aged 72 who died on 9th July of an acute enteritis a few days after his admission to the unit as a perforation. On 11th July, a second patient died, 4 days after sickening and 6 days after a gastro-enterostomy operation. Spread of the infection over a period of about 3 weeks brought the final total to 24 cases, including the wife of the first patient, a nurse in the surgical unit, and a nurse in the fever hospital to which the patients were transferred. S. typhi-murium was isolated from the faeces of all cases. Three patients died. While the infection in the original case may have been food-borne, there is no doubt that its further progress took place by case-to-case spread.

2. *Non-specific Group.*—The largest outbreak in this group occurred in March and affected at least 100 children in 5 schools in the Central and Northern Divisions, all supplied from a common cooking-centre. The peccant food was proved to be gravy prepared from the stock of boiled mutton and finally issued two days after preparation. The illness was of a very mild type and consisted of transient diarrhoea only whose onset was 6 to 8 hours after consumption of the gravy.

In June, 4 members of two families in the Eastern Division were admitted to hospital with an acute illness occurring within two hours of their evening meal which included cold ham. All recovered. The

ham had been brought to Glasgow and consumed 3 days after it had been removed from a ship's refrigerator. Examination of specimens of ham gave a very high bacterial count, and among other organisms, staph. albus (coagulase-negative) was isolated.

The remaining outbreaks, with two exceptions, all had the same feature in common viz., storage of food in an unsuitable environment combined with delay in consumption, suggesting faulty domestic management rather than any intrinsic defect in the food itself. The two exceptions were outbreaks caused respectively by corned meat and tinned peas.

ALCOHOL POISONING.

Early in January, an outbreak of acute illness occurred among about 35 people who attended two household parties in the Blackhill and Townhead districts on the 2nd and 3rd of the month respectively. At both addresses, the beverages consumed included a clear liquid the identity of which was not made generally known, and which was served mixed with lemonade or some other diluent. This liquid proved to be crude methyl alcohol normally used for industrial purposes ; it was consumed by a total of 32 persons, who later sickened in varying degree with symptoms of poisoning. Of the 32 affected, 26 required admission to hospital and 10 died.

The main clinical features of the illness were of the usual pattern in poisoning by crude spirits. Ingestion was followed by a latent period of 18-24 hours. The patients than sickened with abdominal pain, dimness of vision, vomiting, and stiffness and pains in the neck and back. In the fatal cases, coma ensued preceded in some instances by total blindness.

The investigation of the incidents was undertaken by the Police and at the Court proceedings which followed it was established that the methyl alcohol had been removed in some quantity from a chemical works in the Northern area of the city.

It is very satisfactory to observe that in those who survived, the optic neuritis cleared up completely in addition to the other manifestations and that none has shown any residual loss of visual acuity. In view of the results of previous similar incidents elsewhere, this circumstance must be regarded as unusual and fortuitous.

SUMMARY OF OPERATIONS UNDER THE FOOD AND DRUGS (ADULTERATION) ACT; THE MILK AND DAIRIES ACTS; AND ALLIED ACTS, ORDERS AND REGULATIONS FOR THE YEAR ENDED 31ST DECEMBER, 1949.

The Food and Drugs (Adulteration) Act, 1928.—This Act and certain sections of the Food and Drugs Act, 1938, along with various other Acts and Regulations, including Ministry of Food Regulations, made under the Defence of the Realm Act, provide the Food Inspector with the legal powers necessary to carry out his duties. Additional legislation is still much required if the proper supervision of places where food is stored, sold, or handled, is to be efficiently controlled. This cannot be too strongly emphasied.

Wilful adulteration of food is still uncommon in the city and the year's results showed a smaller number of prosecutions than last year which was the smallest recorded for any year. This is a satisfactory position of affairs and reflects some credit on the work of the officers of the Department and on the general good care taken by traders. In 16 instances proceedings were taken against offenders in terms of the Food and Drugs (Adulteration) Act, 1928. In the course of the year 152 types of food and drugs were sampled. Of each type numerous samples were submitted for analysis. A table giving details appears at the end of this section of the report.

The Public Analyst examined 5,700 samples. Of these 1,326 were formal and 4,374 informal. Twenty-seven (2·04 per cent.) of the former and 72 (1·65 per cent.) of the latter were found to be adulterated. The previous year showed 34 (2·63 per cent.) formal samples and 75 (2·05 per cent.) informal samples not to be genuine. Proceedings instituted equalled 16, and 15 convictions were recorded—penalties amounted to £50. There were no infringements in connection with the sale of margarine.

Of cases dealt with, one was a second offence and three were fourth offences. In addition, one prosecution in the Sheriff Court resulted in a fine of £3. This fine was imposed for a contravention of the Meat Products and Canned Meat (Control and Maximum Prices) Order, 1948, i.e., selling sausages with a deficiency of meat content. One respondent was admonished by the Sheriff for selling self-raising flour which did not conform to the Food Standards (Self-raising Flour) Order, 1946, and another offender was fined £5 by the Sheriff for selling cheese cakes which contained mineral oil, contrary to the Mineral Oil in Food Order, 1949.

Abstract of Total Samples Examined during 1949.

Article.	Informal.		Statutory.		Percentage adulterated.		Percentage of Samples taken in each Group to Total.	
	No. Taken	No. Non-Gen.	No. Taken	No. Non-Gen.	Infor. %	Stat. %	Infor. %	Stat. %
Milk	2,854	32	873	5	1·12	0·57	65·24	65·84
Milk Products (Butter, Cheese, etc.)	10	—	36	—	—	—	0·23	2·71
Meats and Meat Food Products	366	20	187	17	5·46	9·09	8·37	14·10
Cereals, etc.	56	1	78	1	1·79	1·28	1·28	5·88
Spirituous Liquors ...	30	2	21	2	6·66	9·52	0·68	1·59
Drugs	359	15	17	1	4·18	5·88	8·22	1·28
Flavourings and Condiments	60	—	29	—	—	—	1·37	2·19
Ice-cream	315	—	—	—	—	—	7·20	—
Miscellaneous Foods ...	324	2	85	1	0·62	1·18	7·41	6·41
	4,374	72	1,326	27	1·65	2·04	100·00	100·00

Abstract of Informal and Statutory Samples of Sweet Milk Examined during 1949.

Month.	Informal.				Statutory.			
	No. examined.	No. Non-Gen.	Average percentage Composition.		No. examined.	No. Non-Gen	Average percentage Composition.	
			Fat. %	Non-Fat. %			Fat. %	Non-Fat. %
January ...	221	5	3·75	8·73	77	—	3·68	8·71
February ...	245	—	3·73	8·77	73	—	3·65	8·75
March ...	284	4	3·80	8·79	75	—	3·77	8·81
April	251	1	3·82	8·69	75	—	3·71	8·68
May	243	2	3·72	8·77	77	—	3.71	8·68
June	225	2	3·77	8·78	76	1	3·64	8·80
July	208	4	3·80	8·65	60	—	3·69	8·70
August ...	209	4	3·88	8·63	58	1	3·76	8·61
September ...	240	3	3·91	8·69	74	1	3·78	8.67
October ...	242	5	4·03	8·76	77	1	3·86	8.68
November ...	239	2	3·99	8·88	75	—	3·95	8.89
December ...	247	—	3·85	8·91	76	1	3·84	8·99
	2,854	32	3·84	8·75	873	5	3·75	8·76
Percentage Adulteration	1·65	—	—	—	0·57	—	—	—

Artificial Cream Act, 1929.—There are no manufacturers or dealers in the city registered with the Food and Drugs Authority.

The Public Health (Preservatives, etc., in Food) Regulations.—There were 10 contraventions of these Regulations during the year compared

with 18 last year. The articles of food concerned consisted of butcher's mince and sausages; four samples of mince were found to contain preservative during the prohibited period, October to May, and six samples of sausages contained an excessive amount. The following list shows the food in which preservatives were found, along with their nature and amount. It will be seen that one sample of sausages contained 1970 parts of sulphur dioxide per million parts and one sample of mince 1068 parts. Apart from these and the cases dealt with by the court the amount of preservative found was not excessive. It was noted that four Baking Powder samples of 22 examined by the Analyst had a fluorine content ranging from 2 to 14 parts per million parts. This is well below the permitted amount of 100 parts per million. It is of interest to note that this substance is being added to some foodstuffs in order to preserve the teeth of young people.

ABSTRACT OF ARTICLES OF FOOD IN WHICH PRESERVATIVES, ETC., WERE FOUND AND THE NATURE AND AMOUNT, DURING YEAR ENDED 31ST DECEMBER, 1949.

Nature of Article.	Number examined.	Number in which Preservatives, etc., were found.	Nature of Preservative, etc.	Parts per Million. Highest.	Lowest.
Beer	8	2	Sulphur Dioxide	32	9
Baking Powder ...	22	4	Fluoride	14	2
Confections	6	5	Sulphur Dioxide	57	6
Figs	6	1	,, ,,	16	
Fruit Juice ...	1	1	Benzoic Acid	60	
Gelatine	6	6	Sulphur Dioxide	589	77
Margarine	18	18	Boron	0·25%	0·06%
Meat Pies	1	1	Sulphur Dioxide	19	
Meat, Potted ...	8	1	,, ,,	96	
Mince	70	20	,, ,,	1,068	12
Preserves	10	1	,, ,,	40	
Sausage Meat ...	3	2	,, ,,	134	64
Sausages	318	208	,, ,,	1,970	6
Sultanas	5	1	,, ,,	12	
Table Jellies ...	17	3	,, ,,	96	32
Wine Essence ...	6	1	,, ,,	96	
Wines, Fruit ...	4	3	Benzoic Acid	435	210

The Milk (Special Designations) Orders (Scotland), 1936/1949.—Four hundred and nineteen samples of Certified and Tuberculin Tested milk were taken for examination over the year and 94 were examined biologically. None was found with tubercle bacilli. This is satisfactory and is now a frequent experience. On the other hand, 15 of 45 samples from Standard herds examined biologically disclosed one sample with tubercle bacilli. It is fairly common to find tubercle infected samples in milk from Standard herds and it is therefore satisfactory that the

designation "Standard" is to be discontinued as a result of the new Milk (Special Designations) Act, 1949.

There are 11 pasteurising and 11 Heat Treatment plants in the City licensed by the Local Authority, a decrease of one in the latter. Premiums are paid by the Ministry of Food to the licensees for treating the milk. Regular inspections are made of these establishments by officers of the Local Authority and a large number of samples taken. Licensees are notified of results and reports are sent on special forms by the Town Clerk to the Department of Health and the Ministry of Food.

The various grades of designated milk dealt in by dairymen in the City are shown in the following table, along with the average daily amount sold. The number of producers, dealers, pasteurising, heat treatment and bottling establishments licensed in the terms of the Milk (Special Designations) Orders is also given.

	1949	1948	1947
CERTIFIED—			
Producers	2	1	—
Dealers	328	313	247
Total Average Daily Sales (Gallons) ...	3,211	2,305	1,871
TUBERCULIN TESTED—			
Producers	24	18	14
Bottling Establishments	6	6	6
Dealers	532	518	518
Total Average Daily Sales (Gallons) ...	*3,532	†3,148	‡3,062
STANDARD—			
Producers	5	9	10
Bottling Establishments	—	—	—
Dealers	—	—	—
Total Average Daily Sales (City Producers only) (Gallons)	236	439	517
PASTEURISED—			
Pasteurising Establishments	11	11	10
Dealers	670	650	627
Total Average Daily Sales (Gallons) ...	65,700	62,448	57,568
HEAT TREATED—			
Heat Treating Establishments	11	12	13
Total Average Daily Sales (Gallons) ...	16,598	19,856	16,856

* Includes 1,429 gallons Tuberculin Tested (Pasteurised).
† „ 888 „ „ „
‡ „ 823 „ „ „

1,109 Samples of the foregoing were taken during the year. All were submitted to the City Bacteriologist and the City Analyst for examination regarding their conformity with the requirements of the Orders. In the following table the results are set out in detail :—

Results of Examinations of Designated Milk (1)

	Certified. (*a*) Not more than 30,000 Bacteria per ml. (*b*) No Coliform Bacillus in 1/10 ml.	Tuberculin Tested. (*a*) Not more than 200,000 Bacteria per ml. (*b*) No Coliform Bacillus in 1/100 ml.	Standard. (*a*) Not more than 200,000 Bacteria per ml. (*b*) No Coliform Bacillus in 1/100 ml.
Bacteriological Examinations—			
Number examined	214	205	45
Number conforming to all requirements	173	177	31
Number exceeding count only	12	12	5
Number exceeding count and having coliforms present	11	2	2
Number conforming to count but having coliforms present	18	14	7
Agar Count per ml. Highest	1,000,000	1,000,000	1,000,000
Agar Count per ml. Lowest	150	500	500
Presence of Coliforms —	185	189	36
Presence of Coliforms +	29	16	9
Chemical Examination—			
Fat Minimum 3% Number 3% or over	214	204	45
Fat Minimum 3% Number below 3%	—	1	—
Average Butter Fat content	3·85	4·12	4.18

Results of Examinations of Designated Milks (2).

	Tuberculin Tested (Pasteurised). (*a*) Not more than 30,000 Bacteria per ml. (*b*) No Coliform Bacillus in 1/10 ml. (*c*) Not more than 2·3 Lovibond Blue Units (Phosphatase Test).	Pasteurised. (*a*) No Coliform Bacillus in 1/100 ml. (*b*) Not more than 2·3 Lovibond Blue Units. (Phosphatase Test).	Heat Treated. (*a*) Not more than 2·3 Lovibond. Blue Units (Phosphatase Test.) (*b*) No Decolorisation prior to 12 noon on day following taking of sample.
Number examined	58	295	292
Number passing each Test	40	270	236
Number failing in one or more of the Tests	18	25	56
Milk-Fat Test No. Satisfactory	58	295	292
Milk-Fat Test No. Unsatisfactory	—	—	—
Average Butter Fat content	3·85	3·78	3·75

The tables show that 83·59 per cent. of the samples examined were in compliance with the required standards, as compared with 84·63 per cent. last year. Chemical examination showed all except one sample, which was slightly deficient in fat, to consist of genuine milk.

Milk Supply to the Hospitals of the Western Regional Hospital Board.—Examination of the milk supplied to the various hospitals, etc., of the Western Regional Hospital Board was observed over the year. This milk is supplied by different farms controlled by the Board in the City and adjacent counties and by other producers and dairymen. All types of designated milks—Tuberculin Tested, Standard, Pasteurised and Heat-Treated—are delivered to these institutions and the milk officers take samples on delivery. In addition, samples are sent in regularly by hospital officials and results are reported to the hospital superintendents and to the suppliers. Three hundred and thirty-three samples were taken during the year and 64 failed in one way or another to conform to the standard of the particular designation. The designations examined and the number of failures are as follows :—

	Examined	Failed
Certified	10	1
Tuberculin Tested	238	43
Standard	2	—
Pasteurised	71	13
Heat-Treated	12	7
Total	333	64

Examination of Ordinary Market Milk for the presence of Tubercle Bacillus.—Milk arriving from producers in the neighbouring counties was sampled at City dairies regularly throughout the year. Of the number, 283 were examined biologically by the City Bacteriologist and four were found to be infected with tubercle bacilli. This shows a percentage of 1·41 compared with last year's percentage of 0·75 and may be considered as satisfactory. The amount of milk produced by tuberculin tested herds in this area of the Scottish Milk Marketing Board continues to increase and at the time of writing is 86 per cent. of the total supply. This is very gratifying and milk producers have to be congratulated on their enthusiasm to establish tuberculin tested stock at their farms. The following table gives the figures for the year along with those of the two previous years. The name of the county where the milk was produced is shown :—

SAMPLES OF PRODUCERS' SUPPLIES EXAMINED FOR THE PRESENCE OF TUBERCLE.

County.	1949		1948		1947	
	No. Examined.	No. Tuberculous.	No. Examined.	No. Tuberculous.	No. Examined.	No. Tuberculous.
Ayr	185	1	138	—	186	1
Dunbarton ...	6	1	9	—	13	—
Lanark	66	2	90	2	45	2
Renfrew ...	18	—	14	—	21	—
Stirling	8	—	16	—	14	—
	283	4	267	2	279	3

Bacterial Counts of Ordinary Market Milk Supplied to the City.—Three hundred and fourteen samples were examined for the number of bacteria and the presence of coliform bacilli. The results are shown in the following table :—

BACTERIAL COUNTS OF ORDINARY MARKET MILK SUPPLIED TO THE CITY.

Number Examined	Average Number of Bacteria per ml.					Coliforms in 1/100 ml. (2 days).	
	Under 100,000.	100,000 to 200,000.	200,000 to 500,000.	500,000 to 1,000,000.	Over 1,000,000.	—	+
314	257	19	17	8	13	263	51

Viewed from the number of bacteria found, 207 (80·54 per cent.) of the 257 samples with less than 100,000 bacteria per millilitre were of certified quality, compared with 219 (79·93 per cent.) of the 274 with less than 100,000 in 1948. Two hundred and seventy-six (87·89 per cent.) of the total number of samples taken were equal to Tuberculin Tested quality, compared with 288 (90·57 per cent.) in 1948. Coliforms were absent in 263 (83·74 per cent.) compared with 275 (86·48 per cent.) in 1948. Three hundred and thirteen samples were also submitted for chemical analysis ; 20 were found low in non-fatty solids. The average fat and non-fat content of the samples was 3·80 and 8·74 per cent. respectively.

Raw Milk as Retailed in the City.—Forty-eight samples of raw milk as retailed were taken from shops and carts. Of this number 18 were examined and none was found positive for tubercle bacilli compared with none of 34 last year. Any adverse result received is communicated to the Medical Officer of Health of the district where the milk was produced, and steps are taken meanwhile to prevent the sale of any infected milk. The sale of raw or untreated milk in the City steadily decreases in quantity each year.

All the samples were examined for the number of bacteria and the presence of coliforms. Results are detailed in the following table :—

BACTERIAL COUNTS OF RAW (UNTREATED) MILK AS RETAILED IN THE CITY.

Number Examined.	Average Number of Bacteria per ml.						Coliforms in 1/100 ml. (2 days).	
	Under 30,000	30,000 to 100,000	100,000 to 200,000	200,000 to 500,000	500,000 to 1,000,000	Over 1,000,000	–	+
48	37	6	4	—	—	1	44	4

Milk to School Children.—Milk of pasteurised quality is supplied to the schools by four contractors and is sampled regularly. One hundred and sixty-one samples were examined during the year in terms of the Milk (Special Designation) Orders. Seventeen failed in one or other of the two prescribed tests.

Below is a table giving a summary of results of the sampling. Another table shows the average daily quantity supplied, computed on a monthly basis, along with the number of school days which occurred in each month. There was an increased consumption this year of 16,137 gallons.

SCHOOL MILK (PASTEURISED).

No. Examined.	No. passing both Phosphatase and Coliform Tests.	No. failing Phosphatase Test only.	No. failing Coliforms Test only.	No. failing both.	No. Tuberculous.	Average Fat Solids.	Average Non-Fat Solids.
161	144	2	15	—	—	3·68	8·70

SCHOOL MILK—1949.

AVERAGE DAILY QUANTITIES SUPPLIED.

Month.	Gallons.	School Days.	Month.	Gallons.	School Days.
January ...	6,315	20	July	16,157	*—
February ...	6,581	20	August ...	37,047	*—
March ...	6,650	23	September ...	6,702	21
April... ...	4,343	22	October ...	6,643	21
May	6,479	20	November ...	6,428	21
June ...	6,452	21	December ...	6,369	20

* Schools closed for Summer Holidays. Amounts of milk shown July and August are consumed at School Feeding Centres and at Transferred Schools.

Milk Summary—Of 419 samples of " Certified " and " Tuberculin-Tested " milk samples taken, 94 were submitted for examination for milk tubercle bacilli and gave negative results. At present the amount of produced in the area of the Scottish Milk Marketing Board from herds which are tuberculin-tested is around 86 per cent. Producers are eager to have their herds free from infection. This benefits all parties concerned—the producer because he receives a premium for each gallon of milk produced from tested animals and because he ensures for himself a readier market when disposing of any animal from his stock of tested cows ; the consumer because he receives milk free of infection. Again this year one sample of " Standard " milk, of 15 examined, was found to have tubercle bacilli present. " Standard " milk is not a product of tuberculin-tested cows and this designation will be discontinued in four years' time as a result of the new Milk (Special Designations) Act, 1949.

One new " Certified " and six new " Tuberculin-Tested " Licences were issued to City producers in respect of their dairy herds and there are four " Standard " licences less. The number of milk producers with dairy herds in the city is 43, a reduction of two from last year. The average daily consumpt of milk in the City remains about the same—95,000 gallons. Approximately 95 per cent. of this quantity is pasteurised or heat-treated. " Certified " and " Tuberculin-tested " milk is included in the five per cent. sold as raw or untreated milk. Two hundred and eighty-three of 314 samples of milk taken from producers supplying City dairies were examined biologically and four were found to have tubercle bacilli present. This show a percentage of 1·44 compared with last year's figure of 0·75 per cent. This is satisfactory and is a result of the increasing amount of tuberculin-tested milk being produced.

There are 11 Pasteurising and 11 Heat-Treatment establishments in the City licensed by the Local Authority, a reduction of one Heat-Treatment plant. The approximate daily sales of designated milks are—" Certified " 3,211 gallons, " Tuberculin-Tested " 3,532 gallons, " Standard " 236 gallons, " Pasteurised " 65,700 gallons, and " Heat-Treated " 16,598 gallons.

There were 1,367,705 gallons of milk supplied to the schools during the year in comparison with the total of 1,351,568 gallons for 1948. This shows an increase of 16,137 gallons. Samples are taken by inspectors and milk officers of this Department from the schools throughout

the year and any complaints from the head teachers are given attention. The samples are commonly examined biologically and none was found with tubercle bacilli. The average butter fat of the samples examined was 3·68 per cent.

There are 1,405 registered dairies in the city, eight less than last year. Forty-three of these are producers' premises. The number of shops selling milk exclusively in bottles steadily increases each year and at 31st December, 1949, 76 per cent. of the dairies in the city were selling bottled milk only. Formal and informal samples taken for analysis over the year numbered 3,727 and the average fat content was 3·79 per cent.

Inspection of Food and Food Premises.—9,517 inspections of markets, stores, shops and places where food is dealt with were carried out. 1,267 lots of food were submitted for reconditioning, passed as suitable only for animal food or destroyed. The total quantity equalled 110 tons, 6 cwts., 93 lbs., and consisted chiefly of canned and other foods, as follows :—meat, milk, fish, vegetables and fruit ; also fresh vegetables, cereals, biscuits, dried fruit and other miscellaneous articles.

Inspection of these food premises disclosed in some instances the necessity for repairs, cleansing and limewashing, These matters were brought to the notice of the persons concerned, verbally or by intimation, and in all cases the work was carried out.

The Glasgow Street Trading Bye-laws have been in active operation now for over a year and are functioning satisfactorily. Some amendments are being made in the bye-laws. One which concerns the Health Department will make the law more comprehensive regarding the suitability for use of any store where it is proposed to keep food intended for sale for human consumption. A street trader will not now be able to use any place for the storage of food unless it has been approved by the Medical Officer of Health. Over the year 470 proposed stores were inspected by the Food Inspectors and reports sent to the Chief Constable. These bye-laws have had good effect as is now evident from the absence from the streets of itinerant sellers of puff candy, toffee apples and other articles prepared often under dirty and unwholesome conditions.

In connection with the Public Health (Meat) Regulations (Scotland), 1932, nine renewals of registration were granted and certificates of approval issued in respect of them. Thirty-seven copies of certificates were provided for vehicles operating from these premises.

Fertilisers and Feeding Stuffs Act, 1926.—Twenty-three samples of feeding stuffs and four samples of fertilisers were obtained from farmers and dealers in the City and delivered to the Agricultural Analyst for examination and report. Four samples of feeding stuffs were found to be deficient in oil, two deficient in protein and one in both oil and protein. One sample of a fertiliser had an excess of nitrogen. The remaining 15 samples were in conformity with the Regulations. Non-complying samples were reported to the sellers and satisfactory explanations have been received and accepted. As required, all results were reported to the Department of Agriculture and Fisheries.

Dairies.—Dairies on the register at the end of the year numbered 1,405 compared with 1,413 last year which is a decrease of 8. This number consists of the following :—43 producers, 16 wholesalers, 27 wholesale and retail dealers, 235 retailers of loose milk, 1,074 retailers of bottled milk only, and 10 carts from without the district. A qualified certificate of registration is granted where milk is supplied only in properly capped and sealed bottles as received from the wholesaler. This certificate is granted where the shop does not fully satisfy the terms of the dairy bye-laws. The percentage of these dairies is 76·00 of the total number registered, compared with 69·00 per cent. in 1948. During the year 15,179 inspections were made of dairies and 13 contraventions were dealt with. In nine instances repairs and alterations were carried out as requested.

There were no proceedings taken against any dairymen for contravention of the dairy bye-laws nor were any proceedings taken under the Milk and Dairies (Scotland) Order, 1934, the terms of which were generally well observed.

Byres.—There are 43 producers in the City having 55 byres. 404 inspections were made of these byres which were found to be generally well kept. Repairs were carried out in one instance and one contravention of the bye-laws corrected. There is provision for 1,383 cows in the byres and the average number kept is 1,165. Only in one instance are no grazing facilities provided for the herd.

Exempted Persons.—There are eight byres in the City where persons keep cows for their own use. The number kept averages 11. In addition, the Western Regional Board Hospital have two attested herds within the City, the number approximating 350 animals. Milk is produced for use in hospitals and institutions only. All these byres are regularly supervised and found to be well kept.

Food and Drugs (Adulteration) Act, 1928, *Section* 8—*Registration of Butter Factories and Wholesale Dealers in Margarine, etc.*—15 butter factories, 120 wholesale dealers in margarine, and one margarine factory are on the register. Visits were paid to these premises in the course of the year, and no contravention was found. Samples taken were reported upon satisfactorily by the City Analyst. Details of the number on the register at the end of the year are as follows :—

Margarine Factories	1
Wholesale Dealers in Margarine	120
Factories of or Wholesale Dealers in Milk Blended Butter	—
Butter Factories	15

The Ice-cream (Scotland) Regulations, 1948.—These Regulations have now become well-known to the members of the ice-cream trade and the alterations and improvements which have been brought about by their introduction are considerably more than was at first thought probable. The type of equipment being installed is of a good design generally and not difficult to manipulate. One operation, that of cooling the ice-cream mixture, has perhaps given operators most trouble. It has been found that a thick mixture will not flow easily over the corrugations of the cascade type of cooler and owing to the slow movement often becomes frozen on to the cooler's surface. Because of this many favour the type of plant which heats and cools in the same chamber. This has the additional advantage of the ice-cream mixture not having to flow over an additional surface, and therefore reduces the chance of contamination. The main precaution to be observed in using these plants is cleanliness along with proper and careful hygienic practices. These operations are often, unfortunately, somewhat casually performed. It is therefore necessary for inspectors during their visits to impress on dealers that the installation of good plant and equipment is the lesser part of the problem ; the greater part always being good hygienic practice. It is necessary again this year to point out the unsatisfactory measure of control which can be exercised over vehicles selling ice-cream in the street. An amendment of the Ice-cream Regulations is necessary to ensure a proper and suitable address from which vehicles should operate. This amendment should not be further delayed. Progress in having registration granted to applicants is of necessity slow as often alterations are required in premises and in addition equipment has to be selected and installed. Finally pasteurising plant has to be approved and tested by the local authorities' inspector to ensure that all is in compliance with the regulations before registration can be recommended.

At the end of the year registration had been granted by the Local Authority in connection with 263 premises and 187 vehicles. During the year 6,610 inspections were made of premises as a result of which repairs were carried out in nine instances and four contraventions were corrected.

In the course of the year 313 samples of ice-cream were examined by the City Analyst and 335 by the City Bacteriologist. The following table gives details of the results found. Standards of purity have not yet been fixed by the Department of Health, but these results act as a guide to the effectiveness of the methods being employed by the manufacturers and dealers.

SAMPLING OF ICE-CREAM—1949.

Bacteria per Millimetre.

No. Examined	No. under 100,000 with Coliforms Absent	No. under 100,000 with Coliforms Present	No. over 100,000 with Coliforms Absent	No. over 100,000 with Coliforms Present
335	234	26	45	30

Methylene Blue Test.

No. Examined	No. not Decolorised	No. Decolorised
313	287	26

Phosphatase Test

No. Examined	No. Passing Test	No. Failing in Test
313	238	75

Fat Content.

No. Examined	Average Fat Percentage	Highest	Lowest
313	4·86	19.30	0.29

Cleansing of Milk Bottles.—As stated last year, the cleansing and sterilising of bottles used to contain milk for human consumption is an important public health requirement. Creameries or large wholesale establishments are usually well equipped with modern bottle washing machinery, either of the soaker sprayer or jet type. These, when properly operated, give no cause for complaint. Other methods adopted in the smaller dairies where the bottles are washed by hand or by rotary brushes are not so satisfactory. As improperly washed bottles cause high bacteria content in milk, the necessity for efficient bottle washing and sterilising is apparent. In the course of the year 256 washed bottles were taken from dairies in the City and examined by the City Bacteriologist. The standard of examination adopted is a maximum of 600 organisms per pint bottle. Of the 256 bottles

examined 192 were found satisfactory and 64 unsatisfactory. Intimation was given in each case when an unsatisfactory report was received from the Bacteriologist. The results found by the different methods employed are as follows :—

	Number	Satis-factory	Unsatis-factory	Percentage Satis-factory
Washed by Soaker Sprayer Type Machine	77	54	23	70
Washed by Jet Type Machine	121	103	18	85
Washed by Rotary Brushes	37	22	15	59
Washed by Hand Brushes	21	13	8	62

It will be seen from this table that washing by rotary brushes and by hand brushes is less satisfactory than the other methods.

The Food and Drugs (Adulteration) Act, 1928.

Details of Samples, etc., in which Proceedings were instituted during 1949.

Number of complaints.	Nature of sample and alleged offence.	Number of convictions.	Amount of fines imposed.	Number dismissed or found "not guilty."	Number deserted simpliciter.
3	*Milk*—Deficient in solids other than fat	3	£13	—	—
4	*Mince*—Contained preservatives during proscribed period	4	£9	—	—
6	*Sausages*—Contained an excess of preservatives	6	£22	—	—
1	*Shredded Beef Suet*—Contained less than 83 per cent. by weight of fat	—	—	—	1
1	*Whisky*—Contained an excess of water	1	£3	—	—
1	*Sausage Rolls*—Moulded and out of condition	1	£3	—	—
16		15	£50	—	1

Abstract of Proceedings under other than Food and Drugs (Adulteration) Act, 1928.

Glasgow Police (Amendment) Act, 1890.

1	Selling and exposing for sale Pears which were unfit for human consumption ...	1	£3	—	—
1		1	£3	—	—

Defence of the Realm Regulations.

Number of complaints.	Nature of sample and alleged offence.	Number of convictions.	Amount of fines imposed.	Number dismissed or found "not guilty."	Number deserted simpliciter.
2	*Sausages*—Deficient in meat content, contrary to Meat Products and Canned Meat (Control and Maximum Prices) Order, 1948 ...	1	£3	—	1
1	*Self Raising Flour*—Available carbon-dioxide yielded was 37 per cent. below limit, contrary to Food Standards (Self Raising Flour) Order, 1946	1	Admonished	—	—
1	*Cheese Cakes*—Contained 1·55 parts mineral oil, contrary to Mineral Oil in Food Order, 1949 (S.I. 1949, No. 614)	1	£5	—	—
4		3	£8	—	1

Special Sanitary Operations.

	1943	1944.	1945.	1946.	1947.	1948.	1949.
(*a*) Food and Drugs, Etc.—							
I.—*Dairies*—							
Registered during year	55	143	103	160	250	193	185
Removed from Register	79	227	110	182	269	205	193
On Register at 31st Dec.	1,558	1,474	1,467	1,445	1,425	1,413	1,405
No. of Inspections ...	17,529	15,829	15,719	15,957	16,071	15,789	15,179
Contravention of Orders Acts, or Bye-laws	22	55	54	65	40	35	15
Prosecutions for same	11	6	4	5	—	—	—
Repairs or Improvements effected ...	28	83	91	75	91	36	10
II.—*Dealers in Ice-Cream*—							
Registered during year Premises	2	—	94	52	42	New Regulations now operative	263
Vehicles ...	—	—	—	—	—		187
Removed from Register	2	1	118	41	36		—
On Register at 31st Dec. Premises	452	451	427	438	444	—	263
Vehicles	—	—	—	—	—	—	187
No. of Inspections ...	1,951	1,144	3,103	3,206	3,873	3,902	6,610
Contravention of Acts, Orders or Bye-laws	—	—	5	11	4	3	5
Prosecutions for same	—	—	1	—	—	—	—
Repairs or Improvements effected ...	—	—	18	14	16	27	9

Special Sanitary Operations—*Continued.*

	1943.	1944.	1945.	1946.	1947.	1948.	1949
III.—*Byres for Milch Cows*—							
No. of Dairy Byres as at 31st December ...	69	64	64	58	59	57	55
No. of Cows licensed or	1,792	1,665	1,665	1,467	1,499	1,458	1,383
Average Number kept	1,565	1,576	1,571	1,239	1,230	1,281	1,165
No. of Inspections ...	473	538	425	477	423	428	404
IV.—*Unwholesome Food*—							
No. of Inspections ...	12,053	10,468	10,026	9,905	10,328	10,493	9,517
No. of Lots dealt with	2,001	2,075	2,308	2,339	3,180	2,380	1,267
	tons	tons	tons	tons	tons	tons	tons
Nature of food destroyed at Inspector's instance with Owner's consent—	99 cwts. 6 lbs.	180 cwts. 17 lbs.	221 cwts. 6 lbs.	145 cwts. 2 lbs.	139 cwts. 16 lbs.	91 cwts. 4 lbs.	110 cwts. 6 lbs.
Assorted foodstuffs ...	41	—	—	—	30	71	93
V.—*Food and Drugs (Adulteration) Act*—							
Informal samples analysed	2,079	2,098	2,183	2,877	3,372	3,659	4,374
Statutory samples analysed	1,284	1,251	1,241	1,245	1,314	1,291	1,326
Statutory samples found non-genuine ...	41	36	45	35	32	34	27
Proceedings instituted	31	28	39	27	24	24	16
No. of Convictions ...	31	25	33	22	17	20	15
Amount of Fines imposed	£110	£103	£124	£80	£63	£70	£50
No. dismissed or found "Not Proven" ...	—	—	—	1	3	1	—
No. deserted simpliciter	—	2	6	2	4	3	1
Warranty Defence sustained	—	1	—	—	—	—	—
No. Pending	—	—	—	—	—	—	—
No. Withdrawn ...	—	—	—	—	—	—	—
No. Dismissed (first offenders)	—	—	—	2	—	—	—

The Food and Drugs (Adulteration) Act, 1928.

Table showing Nature and Number of Total Samples Procured and Examined during 1949.

Nature of Sample.	Informal. No. Taken.	Informal. No. Non-genuine.	Statutory. No. Taken.	Statutory. No. Non-genuine.
Aerated and Mineral Waters	23	—	—	—
Ale	4	—	—	—
Almonds, Ground	1	—	—	—
Alum	23	—	—	—
Apples, Strained	1	—	—	—
Arrowroot	1	—	1	—
Aspirin	44	—	—	—
Baking Powders	12	—	10	—
Barley Flakes and Flour	1	—	4	—

The Food and Drugs (Adulteration) Act, 1928—*Contd.*

Table showing Nature and Number of Total Samples Procured and Examined during 1949—*Contd.*

Nature of Sample.	Informal.		Statutory.	
	No. Taken.	No. Non-genuine.	No. Taken.	No. Non-genuine.
Beer	8	—	—	—
Bicarbonate of Soda	9	—	—	—
Bismuth Compound	4	—	—	—
Black Pudding	17	—	—	—
Blaud's Pills	1	—	—	—
Boracic Acid	4	—	—	—
Borax	20	—	—	—
Brose Meal	—	—	3	—
Buns	1	—	—	—
Butter	9	—	26	—
Calcium Lactate	1	—	—	—
Cascara Sagrada	16	—	—	—
Cheese	1	—	10	—
Cheese Cakes	4	1	1	1
Chellies	1	—	1	—
Cherries, Glace	2	—	3	—
Children's Laxative	1	—	—	—
Chocolate Coating	1	—	—	—
Cinnamon	3	—	2	—
Cloves	—	—	1	—
Cocoa	2	—	12	—
Coffee	7	—	12	—
Coffee Essence	1	—	—	—
Coffee Essence with Chicory	28	—	—	—
Condensed Milk	13	—	—	—
Confectionery	6	—	—	—
Cooking Fat	11	—	19	—
Cornflour	—	—	5	—
Cream, Synthetic	11	—	—	—
Cream of Magnesia	2	—	—	—
Cream of Tartar	19	1	11	—
Culinary Essence	6	—	—	—
Currants	—	—	9	—
Curry Powder	3	—	—	—
Custard Powder	22	—	15	—
Dates	—	—	3	—
Doughnuts	5	—	—	—
Dripping	1	—	—	—
Empire Biscuits	2	—	—	—
Fairy Cakes	1	—	—	—
Farinoca	1	—	—	—
Farola	—	—	1	—
Fat Extender	1	—	—	—
Fat, Sweetened	1	—	—	—
Figs	—	—	6	—
Fish Cakes	2	—	—	—
Fish Dressing	1	—	1	—
Fish Paste	17	—	—	—
Fish and Vegetable Puree	1	—	—	—
Flavouring	1	—	—	—
Flour	8	1	8	1
Flowers of Sulphur	9	—	1	—
Fluid Magnesia	1	—	—	—
Fruit Pudding	2	—	—	—
Frying Mixture	1	—	—	—

THE FOOD AND DRUGS (ADULTERATION) ACT, 1928—*Contd.*

Table Showing Nature and Number of Total Samples Procured and Examined during 1949—*Contd.*

Nature of Sample.	Informal.		Statutory.	
	No. Taken.	No. Non-genuine.	No. Taken.	No. Non-genuine.
Gelatine	5	—	1	—
Ginger	4	—	4	—
Glycerine	6	—	—	—
Glycerine of Thymol	4	1	—	—
Gregory's Powder	20	2	2	—
Gravies and Gravy Powders	2	—	—	—
Haggis	1	—	—	—
Hydrogen Peroxide	5	—	—	—
Ice Cream	314	—	—	—
Ice Cream Powder	1	—	—	—
Lard	—	—	2	—
Lemonade Powder	1	—	1	—
Lime Water	3	—	—	—
Liquid Paraffin	4	—	—	—
Liquorice	1	—	—	—
Liquorice Sticks	2	—	—	—
Macaroni	—	—	6	—
Macaroons	1	—	—	—
Malt Extract	1	—	—	—
Margarine	7	—	11	—
Mayonnaise	2	—	—	—
Meat Cubes	1	—	—	—
Meat, Jellied and Cooked	21	—	—	—
Meat Paste	26	—	—	—
Meat Pies	1	—	—	—
Meat Potted	7	—	1	—
Meat, Pressed	5	—	—	—
Melon, Glace	—	—	1	—
Meringue Powder	1	—	—	—
Milk of Magnesia	1	—	—	—
Mince	27	4	43	8
Mincemeat	10	—	—	—
Mint, Dried	2	—	—	—
Muffins	1	—	—	—
Mustards and Mustard Compounds	1	—	5	—
Oat Flour	1	—	—	—
Oil, Almond	2	—	—	—
Oil, Camphorated	16	2	—	—
Oil, Castor	10	—	—	—
Oil, Cod Liver	1	—	—	—
Oil, Eucalyptus	3	—	—	—
Oil, Olive	18	—	—	—
Ointments, Medicinal	39	—	—	—
Pancakes	5	—	—	—
Parsley, Dried	1	—	—	—
Pastry Mixture	—	—	1	—
Peasemeal	—	—	1	—
Peel, Cut and Candied	1	—	1	—
Peppers	19	—	8	—
Petroleum Jelly	5	—	—	—
Potassium Permanganate	23	—	—	—
Potato Crisps	31	1	4	—
Preserves	10	—	—	—
Prunes	—	—	7	—

THE FOOD AND DRUGS (ADULTERATION) ACT, 1928.—*Contd.*

Table showing Nature and Number of Total Samples Procured and Examined during 1949.—*Contd.*

Nature of Sample.	Informal.		Statutory.	
	No. Taken.	No. Non-genuine.	No. Taken.	No. Non-genuine.
Pudding Mixture	8	—	—	—
Quintessence of Lemon	1	—	—	—
Raisins	—	—	4	—
Rice	—	—	2	—
Rice Flour	3	—	1	—
Rice Substitute	—	—	1	—
Rice Shapes	—	—	1	—
Rum	2	—	1	—
Saccharin	20	1	1	1
Sage	1	—	—	—
Sage and Onion Stuffing	3	—	—	—
Sago	2	—	2	—
Salad Cream	9	—	—	—
Salad Dressing	5	—	—	—
Salt	8	—	—	—
Salts, Medicinal	23	—	—	—
Sauces	28	1	—	—
Sausage Meat	3	—	—	—
Sausages	212	15	106	8
Sausage Rolls	1	—	—	—
Seidlitz Powders	6	4	—	—
Semolina	2	—	14	—
Sherry	1	—	—	—
Short Cake	1	—	—	—
Singers' Tablets	1	—	—	—
Sodium Citrate	2	—	—	—
Soft Drinks Powder and Bars	5	—	—	—
Solution of Synthetic Colouring	1	—	—	—
Soups, Canned	6	—	—	—
Soya Flour	—	—	1	—
Soyghetti	1	—	—	—
Spaghetti	2	—	2	—
Spice	11	—	1	—
Sponge Mixture	2	—	—	—
Stout	1	—	—	—
Stuffing	2	—	—	—
Suet	1	—	16	1
Sugar	—	—	1	—
Sultanas	—	—	5	—
Sweet Milk	2,854	32	873	5
Syrup of Figs	3	—	—	—
Table Jellies	17	—	—	—
Tapioca	—	—	1	—
Tartaric Acid	13	—	—	—
Tincture of Iodine	12	4	1	—
Tomato Pastes	2	—	—	—
Turkey, Jellied	—	—	1	—
Vinegar	10	—	7	—
Vitamin C. Tablets	2	—	—	—
Whisky	4	2	20	2
Wines	4	—	—	—
Wine Essences	7	—	—	—
	4,374	72	1,326	27

ANDREW M. STEWART,
Senior Food Inspector.

SECTION XI.

AIR PURIFICATION AND SMOKE ABATEMENT.

The work of the Smoke Abatement Section of this Department is well known and every effort is made to keep this important branch of Preventive Medicine before the public. The incidence and severity of diseases of the respiratory system are to a large extent a measure of the purity of the atmosphere, and therefore, to contribute to the steadily improving health statistics of the city, the importance of smoke abatement from the atmosphere is constantly emphasised in the propaganda of the Department. The pursuit of a pure atmosphere is as intense as that for a pure water supply, in fact they are complementary to one another.

As a result of our propaganda, more frequent complaints are sent to the Department to be investigated and remedied. These complaints come from all sections of the community either by telephone, personal call or letter. They refer to every type of fuel burning appliance from small stoves to boiler furnaces and involve smoke, grit, soot, ashes and cinders. The public are now less prone to endure such nuisances and so a considerable amount of time has to be devoted to the remedy of personal complaints.

Record of Work during 1949.—From the foregoing observations it will be realised that the Smoke Abatement Section of the Department has been very active during the year, and in addition to attention to complaints and other technical duties, the inspectorate carried through the following routine work :—

Observations on chimneys	20,545
Inspection of Steam boiler and other furnaces ...	365
Intimations of excess smoke served	316
Warning Notices issued	91

The routine duties involve considerable inspection work, during which technical advice is offered to the plant executives as how best to ameliorate the conditions existing in each case. Such advice is usually well received and is invariably acted upon. Unfortunately in many instances memories are short, especially if the operatives concerned have diverse duties allotted them.

During the post war period a large number of new and inexperienced men have joined the ranks of stokers and plant attendants. Proficiency in this field is not achieved overnight and in these days of high load conditions and often inferior fuel, still greater skill is demanded if smoke emission is to be kept within the working limits of the regulations. In addition to combating excessive smoke emission, the advice given and demonstrations made will always result in fuel saving and higher plant efficiency. In the foregoing record of work tabulated, shipping in the harbour areas is included.

Prosecutions.—During the year it was found necessary to resort to legal action for repeated infringement and as a result 14 prosecutions were taken against recurring offenders. Such action is only taken after repeated warnings have been given and each case is judged on its merits. Naturally the rule of the Department is that an amicable settlement of a nuisance is much preferred to a successful prosecution. As a result, the proportion of prosecutions to total warnings given is small. Of the 14 cases heard before the Stipendiary Magistrate in the Central Police Court 13 were in respect of first offences and 13 convictions were recorded. In 12 cases a total of £22 10s. was imposed in fines, an average of £1 18s. and there was one admonished. One case was in respect of a second offence when the fine was £3.

Complaints Investigated.—It may be stated that during the year a record number of complaints were dealt with. These necessitated in almost every case initial interviews, then one or more prolonged observations, inspections and usually subsequent personal intimation to the complainees of the steps taken Many are replied to by correspondence. There is a list of "chronic complaints" of long standing, frequently involving process plants and large boiler units subject to erratic load conditions. The resolving of some of these complaints is difficult due to load factors, fuel conditions, necessity of extensive plant alterations, locations, etc. The very best is done under these circumstances, not all are remedied and a few are obstinate of solution. Records are kept of all complaints.

Improvements to Plant noted during 1949.—In addition to the routine observation and advisory work carried out by the Smoke Inspectors during the year, a record is made of those salutary alterations or additions to boiler and furnace plants, including major auxiliaries which have a direct bearing on smoke abatement. Such improvements may be many and varied and may also involve much capital expenditure. Other alterations may not be costly at all and yet have almost an immediate effect.

As an example of the latter, there might be cited the heightening of a chimney to improve draught or to carry the gases clear of surrounding buildings or areas. Large scale expenditure on the other hand can be incurred in the provision of new or additional boiler plant or furnaces including the necessary auxiliaries. In plants of, say, power station magnitude, extra or improved auxiliaries alone might and do necessitate great cost to the authority. The nature of the undertaking or operations, or the actual condition or short-comings of the plant naturally decide the involvement. In a small business plant such expenditure can be a serious item. The following listed improvements do not by any means give a complete total of all carried out throughout the city during the year but are only those coming directly within the knowledge of this Department as a result of inspection.

Number of new steam boilers installed to give increased power	16
Number of mechanical stokers fitted to steam heating boilers and other furnaces	18
Number of new chimneys erected or existing chimneys heightened	16
Number of boiler or process furnaces converted to gas or oil fuel	10
Number of new mechanical grit and dust arrestors fitted	1
Number of miscellaneous improvements not under the above headings	23

The above list deals with new plant only and does not include repair work done on existing installations such as settings, flues, damper or draughting systems, etc.

Examples of Improvements.—A large baths establishment in the south side of the city had been the cause of many and wide-spread complaints over a long period, the area being closely built up and the premises surrounded by residential dwellings, mainly of the tenement flat type. The steam boiler plant involved was working under heavy

load conditions and a continuity of suitable anthracite fuel could not be maintained. Finally the Baths and Wash-house Committee of the Corporation included the plant in their reconstruction scheme. The plant, consisting of two Water Tube Steam Boilers was increased in combustion space by being lifted bodily several feet and were thereafter converted to oil fuel burning. Pitch Creosote oil is now in use and as the new system is of complete design to utilise this type of fuel the heavy smoke emission has ceased entirely. In fact the chimney connected is now almost smokeless.

In a northern district a large distillery made use of four water tube boilers of early design. These units were hand-stoked and as load conditions were heavy and fuel supplies erratic in type, heavy smoke was of frequent occurrence. The chimney was the subject of several intimations by the smoke inspectors. The company have replaced the plant by an up-to-date lay-out, consisting of four Economic type boilers and all auxiliaries which include induced mechanical draught, grit arrestor, and mechanical stokers.

An ironworks on the south side of the city had part of their steam demand met by three large Water Tube Boilers burning bituminous fuel and hand-stoked. Load demand was heavy and continuous. Heavy smoke emission was the rule rather than the exception and many notices were served on the company. This battery of boilers has been converted to burn coke oven gas from this section of the works. The chimney is now satisfactory and little smoke is noted.

A large firm in the Anderston district operated two large Lancashire type boilers under hand-stoking. Smoke emission was frequent and heavy and the chimney was the subject of repeated intimation to the company by the inspectors. These also have been converted to oil fuel burning and conditions are now satisfactory. This firm has also installed two large Lancashire boilers, mechanically stoked, to replace the "Scotch" type Marine boiler which was hand-fired. A new and higher chimney has been erected to ensure that gases are carried clear of this congested area.

The spool-making section of a well-known sewing cotton combine situated in the south of the City for long made use of two large sectional type boilers to maintain the space heating requirements of their large premises. These units were hand-stoked, invariably with bituminous fuel—an unsuitable combination. Complaints to the management

were frequent, as the smoke emissions were heavy. Finally the company replaced these heating boilers by two economic type steam boilers, fitted with mechanical stokers. The chimney connected is now smokeless.

Many such improvenents could be given but the foregoing cases indicate the trend of the alterations which are now becoming of more frequent occurrence.

Grit and Dust Emission.—Complaints involving this type of nuisance were dealt with during the year although not on quite the extensive scale experienced during 1948. In last year's report the observations under this heading were in greater detail than usual. Some persistent cases were followed up again—notably from the power stations. As a result of plant alterations effected in the large East End station cited previously, improvement has been noted, but it is still unsatisfactory. Much remains to be done. Under the conditions of station operation, improvements involving replacement and repair have to be carried out piece-meal and is always long-term. Fuel conditions are a serious contributory factor, and even with all the projected plant changes a complete solution of the nuisance will not be effected until the fuel situation returns to what was considered normal. At a western district electrical plant the cause of trouble is entirely due to fuel condition. Here many experiments with fuel blending have been tried out and on the whole considerable improvement is resulting, but still not quite satisfactory. Metal refining and foundry operations again figured in the complaints as did also destructor plants, both private and commercial. Greater care in the initial screening of waste material and the provision of fine screens in the flues themselves, effected the necessary improvement. In some cases more frequent flue cleaning of steam boiler units resulted in abatement of recurring nuisances, as did several instances of reduction in intensity of forced draught used. The accumulation of soot and fly ash at chimney bases is a common cause of grit trouble.

A notable alteration was carried through at a large bottlemaking work in the East End of the city. The glass furnaces are fired by gas producers with a long and tortuous main flue. Because of the very high temperature prevailing, flue blowing into the atmosphere by steam-lance is only done twice weekly. Mechanical arrestors cannot be used owing to the temperature conditions. Wide-spread complaint was made by various local committees and individuals. As a result of

several representations by the Department and after repeated visits to the plant, the firm have altered the flue system and rearranged the flue cleaning operation. Much improvement has resulted. Further alterations in damper gear are in hand and this should improve the condition still further.

Fumes and Noxious Gases.—This aspect of nuisance was dealt with several times during the year as the result of continued complaints from a wide area in each case. The heat-treatment processing of chemical compounds used in the waterproofing industry, soda recovery furnaces in paper mills, fish curing lofts, metal and refining cupolas and pots, destructor furnaces, and open fire rubber scrap burning, represented the main types of plant complaints. The fumes and gases complained of in several cases are " characteristic " of the processes, and are very difficult of solution.

In a number of complaints where the resultant gases were of a complex chemical nature, the assistance was sought of the Chief Inspector under the Alkali, etc., Acts, Department of Health. After joint inspections by the latter and the Smoke Inspector reports were submitted indicating the changes necessary in process procedure either to reduce or eliminate the causes of nuisance. Several such causes of complaints were of a recurring nature.

Sectional Heating Plants.—Hundreds of such units are in use throughout the city but the majority are to be found in the central and business areas. They are primarily designed to burn either coke or an anthracite fuel. It is unfortunate that very many do not, and cannot, because of prevailing fuel supply conditions. They can be prolific smoke producers unless carefully stoked and as most of the operatives who tend them are not of the skilled type it is not to be wondered at that they are the subject of many complaints both official and private. They require constant supervision in order to prevent and remedy complaints, but more particularly to keep the normal smoke emissions within acceptable limits.

Mobile Pitch and Asphalt Melters.—Having regard to the frequency of the use of these units by both large and small operators, less trouble is now experienced from their use than formerly. Almost all are fired by coke, but as they often operate in busy central and traffic areas fume nuisance occurs. Complaints of grit and dust are occasioned by

their use, usually by pedestrians in the vicinity. The chimneys are low, being only around ten feet from street level and dwellers in first storeys of tenements are generally the complainers.

Shipping in the Harbour.—Routine observation work was carried out in the dock and harbour areas and a number of special complaints were intimated to the Department. These referred to newly arrived vessels and to several preparing for sea. Naturally a large volume of traffic occurs in the area, but owing to the close supervision of the engineering staffs of the ships the proportionate extent of smoke emission which might be expected to result is correspondingly reduced.

Soot and Atmospheric Precipitation Gauges.—The monthly soot and dust recordings from the five city and two country gauges were carried on during the year. These gauges of the standard precipitation type are sited north, south, east, west and central within the city boundaries, while the country gauges are placed to the north of th Mugdock Reservoir and at Brenachoile on the east side of Loch Katrine. The sites in the respective areas are chosen so as to be as clear of any mechanical interference as possible and also free of local contamination, such as rain washings from trees, shrubs, buildings and paths. The following summarises the information for the year and the previous year and refers to city gauges only :—

DEPOSIT OF EACH ELEMENT OF ATMOSPHERIC POLLUTION.

	Tons per square mile. 1949.	1948.
Insoluble matter—		
Tar	2·86	2·95
Carbonaceous other than tar	37·47	44·32
Ash	96·16	105·52
Total insoluble matter	136·49	152·59
Total soluble matter	109·23	87·65
Total solids	243·25	240·24
Rainfall in millimetres	966·00	1,154·00

Also appended at the end of the report for this section is a table giving details of the average monthly deposit of each element of atmospheric pollution for the year and a comparison for the previous six years.

During 1949 the average weight in tons per square mile of solid deposit was 0·251 per millimetre of rainfall, while the corresponding figure for 1948 was 0·209. This shows an increase of 0·042 for the year. The total precipitation for 1949 amounted to 243·25 tons per

square mile while the figure for 1948 was 240·24, an increase of 3·01 tons. The average for the six yearly period, 1943-1948, was 247·43, indicating a reduction of 4·18 for the current year in comparison with the six yearly average. The average monthly rainfall over the winter period (October-March) was 106·8 millimetres and the average deposit of total solids for the same period was 25·93 tons per square mile. The corresponding figures for the summer period (April-September) was 54·1 millimetres rainfall and 14·60 tons per square mile. The total rainfall for 1949 as indicated by the gauges was 966 millimetres, the figure for 1948 being 1,154. There has thus been indicated a lighter rainfall but an increase in total solid precipitation. The inverse result does occasionally occur and is explained by the fact always pointed out in these reports that the incidence of the rainfall has a direct bearing on the result obtained. "Showery conditions" have a greater cleansing effect on the atmosphere than long periods of downpour.

Course in Boiler House Practice, Smoke Abatement and Fuel Economy.—The 34th Annual Winter Session of the above Course was carried on during the latter part of the year. The Scottish Fuel Efficiency Committee of the Ministry of Fuel and Power again collaborated in the work of the class when the session's arrangements were being made. The Committee circularised most of the local industrial firms using steam and furnace plant, while the Smoke Abatement Society and this Department advised all Corporation and Local Authority departments in the area of the details and dates of the Course. A combined ordinary and advanced class was commenced on Tuesday evening, 4th October, 1949, the venue being the Burgh Court Hall, Municipal Buildings, the use of which was granted by the Corporation. The class met each Tuesday evening thereafter between 7.45 and 9.15 p.m. The fee charged was the nominal one of five shillings. Full use was made of the comprehensive series of wall charts, some sixty in number, possessed by the Health and Welfare Department and also the working models of mechanical stokers. As was the experience during the previous three years, the combined class had to be split up and lectures were given on Wednesday evenings also. This was necessary after the third lecture of the Course. The ordinary class met on the Tuesdays and the advanced on the Wednesdays. The total enrolment was 126. Of this number 84 were ordinary or first year students and 42 advanced students respectively. The Course finished on 13th January, 1950. The average attendance over the session was 75·5 per cent. ordinary and 80 per cent. advanced—a combined average of 77·7 per cent. A total of 22 lectures was given

and in addition three further advanced lectures of 2½ hours each were delivered during April to intending candidates for the City and Guilds of London Institute Examination in Boiler House Practice. Twenty men made application to take this examination this year. The written class examinations were held during January, 1950. Sixty-five men came forward, thirty-four taking the ordinary and thirty-one the advanced paper respectively. Fifty per cent., or over is the pass mark for a merit certificate. Only *bona fide* stokers, boiler attendants or men of similar status attaining 70 per cent. or over are eligible to compete for the three book prizes allocated to each class. Twenty-nine men of the advanced and twenty-eight of the ordinary gained merit certificates. These, with the prizes, were distributed at the Annual Social Meeting held during May. This was attended by members of the Corporation, Smoke Abatement Society and the Fuel Efficiency Committee of the Ministry of Fuel and Power.

THOMAS M. ASHFORD,
Senior Smoke Inspector.

Average Deposit of Each Element of Atmospheric Pollution for Each Month of 1949.

English Tons per Square Mile.

	Month	Rainfall in millimetres	Insoluble Matter				Total Soluble Matter	Total Solids, 1949.	Included in Soluble		Total Solids					
			Tar	Carbonaceous less Tar	Ash	Total Insoluble Matter			Sulphate as SO_4	Chlorine as Cl.	1948.	1947.	1946.	1945.	1944.	1943.
Mean of 5 Stations	January ...	99	·14	4·78	9·27	14·19	10·38	24·57	2·75	2·27	27·98	20·15	25·81	22·35	30·41	26·02
,, ,,	February	93	·29	2·97	8·36	11·61	8·15	19·76	2·48	2,20	22·24	26·48	18·55	34·28	20·67	25·77
,, ,,	March ...	46	·25	3·39	9·87	13·51	7·07	20·58	1·70	1·37	26·99	22·58	22·89	23·16	17·86	20·87
,, ,,	April ...	72	·27	4·21	9·39	13·87	6·11	19·98	1·98	·99	20·99	28·47	14·88	18·88	23·09	28·33
,, ,,	May ...	48	·28	2·46	7·09	9·83	4·31	14·14	1·59	·56	15·99	24·05	12·30	23·28	20·68	19·18
,, ,,	June ...	23	·21	3·00	6·07	9·28	3·67	12·95	1·46	·38	17·58	18·63	17·72	19·94	21·83	18·70
,, ,,	July ...	41	·16	2·31	5·15	7·62	4·83	12·45	1·54	·53	10·78	18·85	14·51	14·72	18·54	20·86
,, ,,	August	96	·24	3·07	6.47	9·78	7·42	17·20	1·85	·71	17·14	No. Rainfall	15·67	14·59	22·07	21·09
,, ,,	September	45	·31	1·36	4·63	6·30	4·59	10·90	1·61	·28	16·48	28·47	22·70	18·29	19·62	11·37
,, ,,	October ...	132	·22	3·05	8·77	12·05	9·74	21·79	2·15	1·32	18·11	15·04	15·84	21·33	24·05	19·92
,, ,,	November	84	·15	4·45	9·38	13·98	8·05	22·05	2·48	·86	21·59	23·95	20·40	15·85	22·09	18·13
,, ,,	December	187	·34	2·42	11·71	14·47	34·91	46·88	6·56	11·40	24·37	24·17	27·82	22·57	24·16	19·88
Yearly Deposit in tons per square mile		966	2·86	37·47	96·16	136·49	109·23	243·25	28·15	22·87	240·24	250·84	229·09	249·24	265·07	250·12
Monthly mean of all Gauges		80·5	·24	3·12	8·01	11·38	9·10	20·27	2·35	1·91	20·02	20·92	19·09	20·77	22·09	20·84

SECTION XII.

GENERAL SANITARY OPERATIONS.

CENTRAL DIVISION.

The advent of the year brought into administrative force the new arrangement of municipal wards. This redistribution made only one minor alteration in the divisional boundaries—the transfer to the Eastern Division of a small strip of Exchange Ward comprising 24 acres and containing 344 houses and a small number of factories. Internally the change saw the disappearance of Blythswood and Sandyford Wards by coalescence with adjacent wards and the splitting of Yoker and Knightswood Ward into two separate wards of Yoker and Knightswood. Other ward boundaries were enlarged or constricted. Altogether, the changes left the division with nine wards, an area of 7,050 acres containing 61,837 houses and a population of 230,742 persons.

Administration during the year followed normal lines with no highlights, nuisance discovery and abatement playing, as usual, a predominant role. The partial survey of catering establishments mentioned in last year's report proved so instructive that it was decided to extend it to all catering establishments in the division. This work is now in progress and, while full comment will be deferred until completion, two facts have already been sufficiently clearly established to merit remark—the existence of a quite alarming degree of complacency on the part of many caterers regarding hygienic food handling and the readiness of most, when this complacency has been disturbed, to co-operate in having conditions improved.

The survey under the Shops Act, 1934, commenced in 1948, was completed during the year and the results are given in some detail in the body of the report. Rat destruction continued unceasingly throughout the year and with very successful results. The decision of the Corporation that the department should take over the operative side of this work from the Department of Agriculture is welcome, as a closer control and co-ordination will be possible under the new arrangement.

Again the melancholy, frustrating fact has to be recorded that no closure or demolition of unfit houses under the Housing Acts was found possible. Until this situation is remedied, a great deal of our other work must continue to be a mere beating of the air.

As in the previous year, a number of cases came to light of aged and infirm folk living alone and in insanitary conditions. A great deal of time and labour and the diversion of staff from their normal duties were involved in dealing with such cases. No complete answer to this problem appears to be in sight, but it will undoubtedly grow and some policy will require to be decided upon sooner rather than later.

These and other matters arising in the course of the year's work are dealt with more fully under their respective headings and detailed figures will be found in Table XVII of the Appendix.

Nuisances.—Complaints of nuisance reached the department from many quarters but the bulk are discovered by the district inspectors in the course of their routine surveys. This is especially the case in the congested areas where housing conditions are worst and one wonders what the position would become but for this continuous surveillance. One hundred and five thousand, five hundred and ninety-three visits under this heading were paid during the year. The bulk of the nuisances dealt with were of the familiar type. Many are a by-product of the continued and accelerating deterioration of house property. " Statutory notices " under Section 20 of the Public Health (Scotland) Act, 1897, were required in 12 cases and court proceedings in four in order to secure abatement of nuisance conditions. In two of the court cases decree was given in favour of the Local Authority and the Town Clerk was awarded expenses ; the third case was withdrawn on completion of the work and payment of modified expenses to the Town Clerk ; and in the fourth case, decree has been given for the necessary work to be completed by 1st March, 1950.

Rodent Control.—It may now be claimed that this branch of departmental activity is becoming widely known and appreciated—especially by the commercial section of the community. Many requests for our services were received during the year. A very successful year's work was carried through both in the killing of rats and the

making of vulnerable premises ratproof. It is to be hoped that the recently imposed cuts on capital expenditure will not result in any curtailment of this very necessary work. Five hundred and seven premises were treated and a total of 6,027 rodents killed, consisting of 5,290 rats and 737 mice. Eight premises were the subject of major ratproofing, while in many others minor ratproofing was carried out. Some of the more spectacular " kills " were as follows :—restaurants 89, 118, 176, 376 and 408 respectively ; warehouses 165 and 215 respectively ; skin and metal merchant's store 424 ; piggery 90 ; canal embankment 163 ; and disused tenement washhouse 85.

Factories Act, 1937.—The administration of this Act was on normal lines so far as factories were concerned. The quinquennial inspection of basement bakehouses in terms of Section 54 of the Act fell due during the year. As a result, the Medical Officer of Health recommended the withdrawal of the " Certificate of Suitability " from one such place and the continuance in force of the remaining two. No appeal was lodged against the withdrawal and this bakehouse is now closed down. In addition, the basement bakehouse referred to in last year's report as having had their Certificate continued from year to year since the war owing to the difficulty of securing alternative premises, also closed down during the year—having at long last secured the desired accommodation.

Shops Act, 1934.—The survey of shops commenced in 1948 was completed during the year. This entailed 7,678 visits. The final assessment of the result gave the following figures :—

No. of shops		4,233	
No. of employees—Male	12,280		
Female	19,403		
		31,683	
Shops with sanitary conveniences for own use		2,698	(63%)
Shops with sanitary conveniences for each sex		540	(12%)
Shops with sanitary conveniences used in common ...		1,360	(32%)
Shops without sanitary conveniences		175	(4%)
Shops without internal water supply		26	(0·6%)
Shops without heating		101	(2%)

Of the total shops, 1,771 or 41 per cent. are situated in Exchange Ward. At the other end of the scale is Knightswood Ward with only 25 or 0·5 per cent. A proportion of the shops without sanitary conveniences or water supply are of the nature of kiosks where the installation of such facilities is impracticable.

This Shops Act is a most difficult one to administer. No standards of heating, ventilation or of sanitary accommodation are laid down and each case must be decided on its merits : nor is any guidance given as to whether the owner or occupier is to be held responsible for the provision of such facilities—this also has to be decided by the responsible official in the light of the particular circumstances. In many cases the requirements of the Act are quite impossible of enforcement owing to the nature of the premises. It would be a step in the right direction if legislation made it impossible to construct or convert premises for use as a shop until the requirements of the Shops Act as regards heating, lighting, ventilation and more especially washing facilities and sanitary conveniences had been complied with.

Common Lodging Houses.—There were on the register at the end of the year 11 common lodging houses (including four boarding-houses for seamen) with accommodation for 1,968 males and 276 females. All were visited regularly and only minor irregularities required to be dealt with. One boarding-house for seamen was opened during the year. This is Atlantic House situated at the corner of York and Argyle Streets. It is a model of its kind and offers a high standard of amenities to its clients. A unique feature is the provision of some bedrooms for married seamen who may be stationed in Glasgow for some time and wish to have their wives with them. At the request of the Admiralty, two large attic apartments have been transformed into dormitories for naval seamen on short shore leave.

Drainage.—The level of drainage work was about that of the previous year. Large scale house building operations now resumed in the division after a lapse of some years had not advanced to a stage to find reflection in the drainage statistics. During excavations for an extension to the M'Alpin Nursing Home, an old brick-lined well with puddled-clay joints was discovered. The upper water level was only 2 feet 6 inches below ground level. The well was sealed over. Very extensive building operations and alterations have been in progress at the University involving much consultation and work for the inspector concerned. An interesting feature was the use of a new plastic material for branch wastepipes from laboratory sinks discharging an effluent with a high acid content. The use of this material was only authorised after it had stood up to very severe tests by laboratory personnel.

Piggeries.—One piggery closed in 1947 was relicensed during the year—bringing the total to 7 with accommodation for 1,922 pigs. In addition to normal visitation, a special survey was made of such places for evidence of rat infestation. One piggery when treated yielded 90 rats.

Common Closes and Stairs.—In three cases proceedings were found necessary in connection with breaches of the bye-laws by tenants. Fines amounting in all to 40s. were imposed.

Common Entries and Staircases (Limewashing, painting, etc.).—In connection with this work, 890 notices were issued of which 564 had been complied with by the end of the year in addition to 384 properties where the work was done voluntarily. The balance of 326 notices not yet complied with is expected to be cleared up early in the next year. Court proceedings were instituted against one factor who failed to comply with a notice after written and verbal reminders. The proceedings were dropped on receipt of a written assurance that the work would be immediately put in hand. It is noteworthy that very few proprietors who receive notice to limewash or paint their properties exercise the right of appeal to the Magistrates which is clearly indicated on the form of notice.

Housing.—As already stated, no action under the Housing Acts was found possible during the year. Six tenements were condemned as dangerous by the Dean of Guild. Four of these have been demolished and the others await the rehousing of the tenants before meeting a similar fate. The six tenements contained 103 houses—32 single apartments, 65 two apartments and 6 three apartments. New housing accommodation provided amounted to 102 houses made up of new construction, repair of war damaged houses and sub-division of large houses.

Rents Restrictions Acts.—Applications from tenants for certificates of disrepair under the Acts totalled 81, of which 45 were granted and 36 refused. Four applications for "reports" were received from owners and all were granted.

Water Storage Cisterns.—One thousand, one hundred and twenty-two visits of inspection were made to water storage cisterns in tenement properties. Two hundred and forty-two notices were issued regarding cisterns found dirty, unventilated or unprotected. By the end of the year 218 of these notices had been complied with.

Fly Control.—Stables and piggeries throughout the division were treated by D.D.T. spraying during the summer in an effort to suppress the breeding of flies. This treatment was also extended to ashbin shelters in tenement property. It is difficult to assess the results of these measures over one year and probably some time must elapse before a proper judgment can be arrived at.

Supervision of Rehousing Schemes.—This work continued on normal lines and with little of note to comment on. Full details will be found in Table XVII.

Sanitary Conveniences.—The position as regards sanitary conveniences is substantially unchanged. A number of common water-closets disappeared with the demolition of tenement properties and the number of houses with baths increased with the new construction already referred to.

W.c.s used in common—		
Serving 2 tenants	1,029	3,163
,, 3 ,, ...	1,272	
,, 4 ,, ...	635	
,, 5+ ,, ...	227	
Dry closets and privy middens		18
Ashpits		45
Houses without internal water supply		44
Houses with baths		33,583

GEORGE LAUDER
DIVISIONAL SANITARY INSPECTOR.

NORTHERN DIVISION.

Reference was made in the 1948 Report to the effects which the reorientation of the municipal wards would have on the Division. One effect has been a reduction in the area of the Division from 13,426 acres to 8,172 acres, and an increase in the average density of the population from 21·00 persons to 31·22 persons per acre. Any comparison with previous reports will be misleading.

Subsequent on the rearrangement of the municipal ward boundaries the opportunity was taken to redivide the Division into districts on a geographical basis. The fourteen districts thus formed are more compact than the previous districts and can be covered with greater facility.

Housing remains the major problem to be solved. Of the 66,920 houses in the Division it is estimated that 3,923 are unfit and 13,931 are likely to fall into that category at some future date. The frustration met with in past years in dealing with the problem of the unfit house was again experienced. Demands on new houses for other purposes prevented any real effort being made during the year. The time has now arrived for priority in new building to be given for the rehousing of families living under unsatisfactory conditions. This would permit the undertaking of clearance areas on a limited scale.

Another aspect of housing that is giving concern is the rapid deterioration of dwellings through lack of repair. Many properties which were expected to give useful service for a number of years to come are being demolished because they are unstable. In former times the rebuilding of chimney heads or bulging walls would have been undertaken by the owners, but high costs now make this an uneconomical proposition.

About 1,000 new houses have been built in the Division during 1949, but this number is infinitely small when compared with the many thousands required to provide for the homeless, the overcrowded, and the inhabitants of unfit houses.

Happily results in other branches of the work of the Division are more satisfactory.

Public Health (Scotland) Act, 1897.

Nuisances.—During 1949 the number of nuisances detected and brought to the notice of those responsible was 15,392. By the end of the year 14,694 were removed. Reference to Table XVII will give some indication of the wide range of conditions dealt with. Only on 36 occasions was it necessary to seek the sanction of the appropriate committee of the Local Authority to issue statutory notices. Resort to court proceedings was unnecessary.

Early in the summer the silted and foul condition of the Molendinar Burn where it crosses Drygate and enters the culverts at Duke Street called for attention. At a meeting of the riparian owners it was agreed to request the City Engineer to prepare and issue contracts for the necessary work and to allocate to each a share of the cost. Several hundred tons of silt and debris were removed and the channel of the

burn deepened by three to four feet. The opportunity was taken to direct the attention of the City Engineer to the discharge of crude sewage from seven tenements (containing seventy dwelling houses) into the burn and to request that appropriate action be taken to have the drains of these houses connected to the public sewer nearby.

An escape of liquid from residual waste material on ground belonging to Imperial Chemical Industries, Ltd., at Pinkston Road into the public sewer gave rise to a number of complaints at various points in the Parliamentary Road and Port Dundas areas. When the liquid mixed with household sewage sulphuretted hydrogen was evolved giving rise to very offensive smells. Special drainage to convey the liquids from the residual waste direct to the River Clyde is provided, but on occasion this breaks down. Prompt attention is given by the Company to any complaints brought to their notice, but the drainage provided for collecting the offending liquid is deteriorating and a rather costly overhaul will have to be undertaken in the near future if the nuisance is to be kept in control.

Offensive Trades.—There are five offensive trades in the Division, viz. :—skin and hide factors, soap boilers, tanners, horse slaughterers and knackers.

The conduct of these businesses gives no cause for complaint although the occupiers have from time to time to be reminded of the need for the utmost care if nuisance is to be avoided.

Piggeries.—Seventeen piggeries with accommodation for 3,196 swine were licensed. Regular visits were made to ensure that the bye-laws controlling the conduct of these premises were being observed. Any irregularity brought to the notice of the licensee was promptly attended to.

Common Lodging Houses.—The five lodging houses registered with the Local Authority were visited on 93 occasions and 13 faults or defects were brought to the notice of the keepers. On the whole the lodging houses are well conducted, but there is much room for improvement in the facilities provided for the inmates. One would like to see established in each house a clean well conducted restaurant supplying a hot meal to the residents at a charge within their capacity

to pay instead of the hot plate around which the inmates gather to prepare their own meal. The mixture of odours arising from the various pans and pots is easier to imagine than to describe.

Washing and bathing facilities and sanitary conveniences while conforming to the bye-laws controlling lodging houses leave much to be desired.

Many residents in lodging houses have had, through necessity, to make these places their homes, and opportunity to enjoy some of the elements of home life should be given to them.

The five lodging houses have accommodation for 1,584 persons and the average number of residents was 1,397.

Tents, Vans and Sheds.—The sanction of the Corporation was granted to five owners of land, permitting them to let it for occupation by movable structures used for human habitation. Satisfactory sanitary conditions were found existing on the 48 occasions the sites were visited.

Glasgow Police Acts.

Cleansing of Common Passages and Stairs.—The enforcement of the bye-laws relative to the above entailed 2,380 visits, the issue of 5,496 rotation cards and the administration of 1,542 verbal warnings.

Much time is taken up with complaints of householders against their neighbours who have failed to carry out their obligation. Usually a word of advice or a warning to the offending party is sufficient to settle the matter in dispute, and only on three occasions was it necessary to institute Court proceedings against defaulters.

Limewashing and Cleansing of Walls, etc., of Closes and Staircases.—Notices requesting the owners of properties to limewash and to cleanse or paint the walls and ceilings of closes and staircases were issued on 1,142 occasions. The majority responded but considerable delay was experienced before the work was actually carried out. Tradesmen who have more lucrative work on hand are not anxious for this type of job.

It was found necessary to request the Procurator Fiscal to institute proceedings against three house factors for failing to comply with the notices. All pled guilty but put forward extenuating circumstances for failure to act on receipt of notices. All were admonished.

Dirty Houses or Bedding.—It was necessary to deal with 55 householders whose homes were found in an insanitary condition. Fortunately it was not required to take Court proceedings against them. Many of the houses were those of elderly people unfit to look after themselves and in need of care. Where this occurred the Department had the house treated for vermin; if necessary, the occupant deloused by D.D.T. treatment and thereafter the house cleansed and all personal clothing and bedding washed. If the old person could be left at home it was arranged for a domestic help to go in part-time to prepare meals and keep the house in a reasonable state of cleanliness.

The number of old people requiring this attention is increasing considerably and one has doubts as to how long the present arrangements for dealing with the problem will continue to operate. There is need to establish in the Department personnel whose task it will be to go into the homes of old people found verminous and insanitary and clean them, thereafter visiting as often as required to keep them clean. The persons so employed would have to be trained in handling bed cases and in the uses of modern insecticides. They would have to be well paid as the task is not an enviable one.

During 1949 30 elderly persons whose average age was 75 years were brought to our notice. Twelve found verminous were treated in their homes; 15 were assisted by having their bedding and clothing washed at regular intervals; and 7 had their homes cleansed. Six were removed to a general hospital and 5 to Part III accommodation in Foresthall. Seven died during the year.

On three occasions application was made to the Sheriff for an order in terms of Section 47 of the National Assistance Act, 1948, to remove 3 old ladies, who were in need of care and attention and who refused to go into hospital.

Drainage.

With the development of the Milton Estate and Robroyston and Balornock Housing Schemes and a number of other building projects including a Urological Block at the Glasgow Royal Infirmary, there were increasing demands on the staff for the supervision and smoke-testing of drainage installations.

Over 3,444 visits were made to building sites and the smoke-test was applied on 782 occasions.

The new Urological Block attached to the Royal Infirmary incorporated many interesting features including the use of thermo-electric heating in which the heating elements are embedded in the floor and wall structure. An even distribution of heat throughout the building is claimed for this method while the temperature is controlled thermostatically. The design of the drains required careful consideration to ensure efficiency of functioning along with economy in the use of materials.

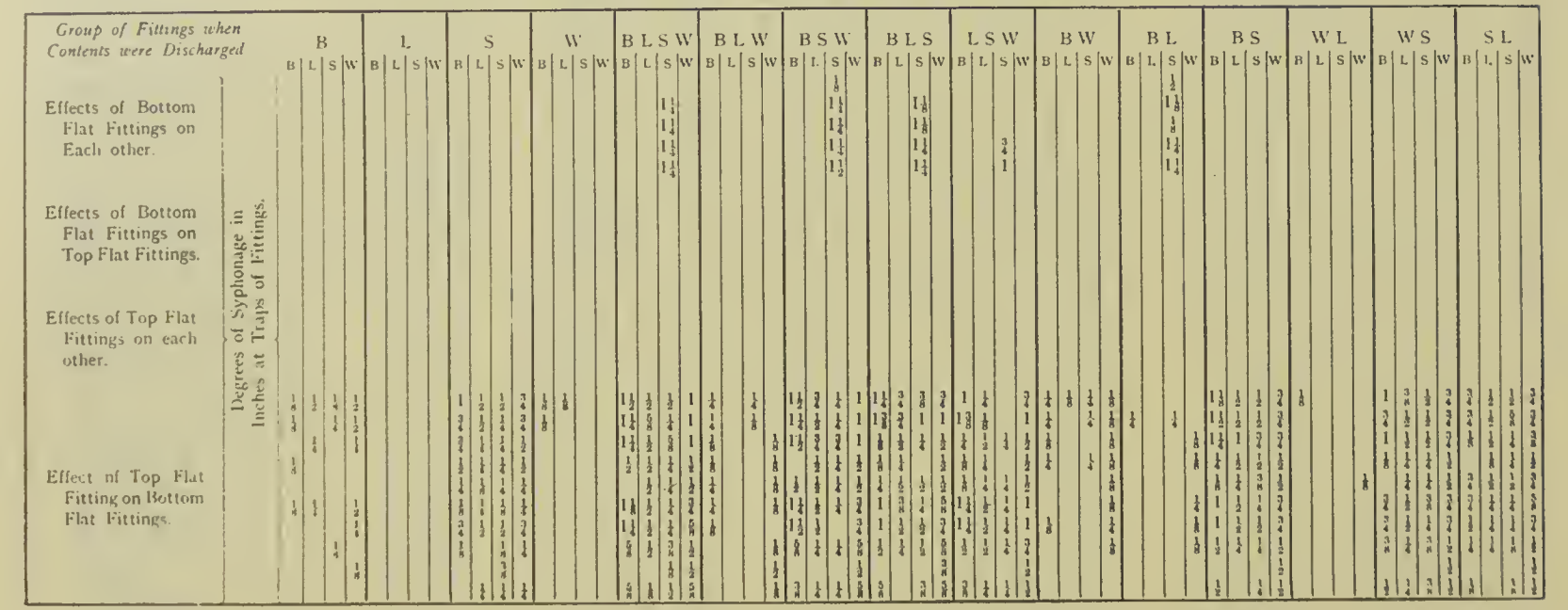
Concern has been expressed on a number of occasions by some sanitarians at the innovations in plumbing practice in the cause of prefabrication, especially where these were thought to produce additional health hazards. With a view to proving the efficiency or otherwise of a prefabricated plumbing unit installed in blocks of four houses some experiments were undertaken. The houses are of the flatted type with two on the ground flat and two on the upper flat. The bathroom and kitchenette in the upper flat are immediately over those in the ground flat. A pipe duct is formed between the bathroom and kitchenette and contains the supply piping and a 4 inch diameter copper soil stack to which are welded the branches from the water closet, bath, wash-hand basin and tub and sink of two houses —a one pipe system without the provision of anti-syphon pipes.

The object of the experiment was to observe the behaviour of the water seals in the traps at the various fittings when in use, i.e., the loss in efficiency of the water seals when the contents of the fittings were discharged singly or in various groups.

Ten houses in a group of 100 houses were selected at random. The depth of the water seals in the traps at all fittings was measured by dipping with a pipette before and after each test and any difference noted.

When the contents of the fittings in the top flat houses were discharged there was no material effect on the water seals, (see table on page 192). On discharging the contents of the fittings in the ground flat houses the effectiveness of the water seal in the trap at the tub and sink was reduced in varying degrees, depending on the groupings of the fittings discharged. When the contents of the bath, water-closet and tub and sink were discharged simultaneously the effective-

TABLE OF RESULTS IN TESTS FOR SYPHONAGE AT TRAPS OF FITTINGS IN ONE PIPE PLUMBING WITHOUT ANTI-SYPHON PIPES INSTALLED IN BLOCKS OF FOUR HOUSES.



		Mins.	Secs.
B = Bath.	Contents of Bath when Discharged = 18 gallons. Average Time Discharge	1	58
L = Lavatory Basin.	" L. Basin " = 1½ " " " "	0	15
S = Tub and Sink.	" Tub-Sink " = 13 " " " "	0	25
W = Water-Closet Basin.	" Water Closet " = 3 " " " "	0	14

DIAMETER OF BRANCHES AND LENGTHS FROM CENTRE OF TRAP TO CONNECTION AT DOWN PIPE.

Bath = 1½ ins. diameter 2 ft. 10½ ins. long. Effective Seal of Trap = 1⅛ ins.
L Basin = 1½ ins. " 5 ft. 8 ins. " " " " = 3½ ins.
Tub Sink = 2 ins. " 6 ft. 6 ins. " Bottom Flat Top Flat 3 ft. 7 ins. long. Effective Seal at Trap = 2¾ ins.
W C Basin = 3½ ins. 2 ft. long. Effective Seal in Trap = 2 ins.

ness of the trap at the tub and sink was reduced by 39 per cent. The fittings flushed individually had no material effect on the traps.

The effects on the efficiency of the traps at the fittings in the ground flat houses when the contents of the fittings in the upper flats were discharged were more serious. In nearly every instance the water seals were impaired to some degree, especially that of the trap at the bath which, in one or two cases, was completely unsealed. Apart from the one or two traps completely unsealed sufficient water was retained in the traps to form a barrier to drain gases.

If some adjustments of the diameter of the branch and an increase in the depth of the water seal of the trap were made the unsealing of the bath traps might be overcome.

The experiments did indicate that some simplification in accepted plumbing practice can be made without affecting efficiency. But, it must be stressed that no simplified design should be acceptable before it has been proved by tests. It is desirable that a code of practice for the simplification of drainage in prefabricated plumbing units be formulated to prevent unsatisfactory designs being used.

Good progress has been made in the construction of the new main sewer that is to serve the north west area of the City. It has now reached a point north of the Milton Estate Housing Scheme and will permit the development of a large area for housing and industrial purposes.

Water Supplies.

For a number of years the Division has been responsible for procuring weekly specimens of the water supplied to the city from Loch Katrine for bacteriological analysis to check the adequacy of the chlorination of the water before delivery to the service mains. This has necessitated visiting the Mugdock and Craigmaddie Reservoirs, Milngavie, the samples being obtained at the inlet basins, at a point where the water leaves the reservoirs and at the service mains half-an-hour after chlorination.

A typical bacteriological analysis of the water reaching the city is given hereunder. It represents a water of very high purity.

Bacterial Count per ml. on Agar at		Faecal B. coli.		Faecal Strept.
37°C.	22°C.	Absent from	Present in	Absent from
1	3	50 ml.	—	50 ml.

During 1949, 356 specimens of water were obtained and submitted to the City Bacteriologist for analysis.

Demands on the water supply have increased considerably during the last few decades and this has been reflected on the volume of water reaching some of the higher areas in the Division. A number of complaints of lack of water have been received from householders, especially in the Cowlairs and Possilpark Areas. In some instances the cause was found to be due to the removal of storage cisterns which had become defective, the houses being supplied from mains in which sufficient pressure could not be maintained throughout the 24 hours of the day.

It is expected that when the new East Main is put into service there will be an improvement in the areas most seriously affected.

Five hundred and ninety-nine cisterns for the storage of water for dietetic purposes were cleansed by property owners on receipt of notices issued in terms of the Police Acts.

Rats and Mice (Destruction) Act, 1919, and Rats and Mice (Scotland) Order, 1942.

Rat destruction was carried on with increasing vigour during 1949 and resulted in 12,954 rats being accounted for.

The importance of this work cannot be over-emphasised when it is realised how large is the amount of food that a rat destroys each year. Damage is not confined to food, for building fabric is affected by the peregrinations of the rat in search of food. Rats and mice are also the carriers of disease.

A thorough knowledge of the rat and its ways is necessary if successful war is to be waged against it. The nesting places are somewhat remote from the sources of food and water supply, and, rats being nocturnal, evidence of their presence depends on what traces they leave behind.

Two methods of hunting out the rat were adopted, viz. :— systematic inspection of buildings, block by block, in a defined area —the Block Control Scheme—and investigation in areas from which complaints of infestations were received.

The first area selected in 1948 for the Block Control Scheme —the Cowcaddens and Townhead Wards which extends to 430 acres— was completed during 1949. The results obtained in the period of the survey 1948/1949 are tabulated hereunder as follows :—

TABLE SHOWING RAT DESTRUCTION OPERATION IN BLOCK CONTROL SCHEME.

No. of Premises visited		10,237
Type of Premises—		
Tenements (Houses)	8,542	
Business	1,224	
Factories	471	
Found Infested—		
Tenements...	128	
Business	94	
Factories	70	
Degree of Infestation—		
Light	272	
Heavy	20	
No. of Rats killed	4,650	
Average Cost to Occupier per Rat killed ...	11·8d.	
No. of Premises Rat-proofed	259	
Premises Reinfested	30	

On completion of the above Scheme the sewers in the area were poison baited, and it is estimated that another 2,640 rats were destroyed by this means.

The advantage of systematic inspection of premises is that light infestations are revealed before they assume serious proportions and heavily infested premises can be pin-pointed for periodic visitation.

A large number of complaints of rat infestations received from other areas in the Division were investigated and appropriate action taken. In addition, all farms, piggeries, offensive trades and other premises which, because of the nature of their business attract rats, were visited.

The following table gives details of the premises visited and the result of the operations undertaken during the year 1949 :—

RAT DESTRUCTION OPERATIONS UNDERTAKEN DURING 1949.

Type of Premises.	Number visited.	Infestation. Light	Infestation. Heavy	Rats destroyed	Hours chargeable to Occupier or Owner.	Cost to Occupier or Owner. £	s.	d.	Average Cost per Rat destroyed.	Premises Rat-proofed.
Tenements (House, cellars, etc.) ...	8,202	142	4	1,145	318	67	13	9	1·2d.	140
Offices	78	10	—	55	33	6	13	6	2·5d.	10
Food Factories ...	60	25	7	2,750	389	79	18	6	-·6¾d.	30
Food Shops	340	64	6	767	377	77	1	6	2·0d.	49
Factories (General) ...	193	18	7	1,598	397	81	11	6	1/0¼d.	23
Shops (General) ...	427	33	—	212	141	25	9	0	2/4¾d.	33
Restaurants	13	5	—	67	41	9	5	9	2·8d.	5
Farm and Piggeries ...	27	6	21	2,137	608	123	16	6	1/1¾d.	2
Offensive Trades ...	3	1	2	264	154	30	19	6	2/4d.	1
Refuse Coups	8	2	6	1,150	135	26	13	3	-/5¼d.	—
Sewers	—	—	—	2,640	112	21	17	6	-/2d.	—
Totals	9,351	306	53	12,785	2,705	551	0	3	-/10·3d.	293

There is general awareness of the urgency in dealing with infestations and when these occur no difficulty is experienced in obtaining the consent of the owners or occupiers of premises to undertake considerable expenditure in the destruction operations and the subsequent rat proofing required.

New legislation to replace that existing for dealing with rodent pests was passed through Parliament during the year and will come into force in April, 1950. The Prevention of Damage by Pests Act, 1949, places on both owner and occupier the responsibility of keeping their premises free from rats and mice and makes it obligatory for them to notify the Local Authority or the Department of Agriculture for Scotland, according to the use to which the premises are put, when these become infested. It will be the responsibility of the Local Authority to have their areas surveyed from time to time and have appropriate action taken. This legislation was overdue and should go a long way to simplify the work of dealing with the rat menace.

With the coming into force of the new Act the Department envisages the setting up of a special section to undertake pest destruction operations. This work is at present carried out by the

Pests Destruction Branch of the Department of Agriculture for Scotland. While this arrangement worked satisfactorily it did not always permit as close liaison between inspection and destruction as was desired. An appropriate expression of appreciation is made here to the officers of the Pests Destruction Branch of the Department of Agriculture for Scotland in Glasgow for their co-operation in many undertakings with this Department.

Housing (Scotland) Acts, 1925-1949.

Nine hundred and sixty houses were built during 1949 in the two housing schemes—Balornock and Robroyston, and Milton Estate ; to this number should be added one house erected at a factory for an employee and 15 by the subdivision of six large villas, a total of 976 new houses. To offset these figures 232 houses were demolished or closed for various reasons, leaving a nett increase in the housing accommodation in the Division of 744 houses.

Since 1945, 2,096 permanent and 413 temporary houses have been erected in the Division.

Total Number of Houses, Northern Division, at Whitsunday, 1949.

Ward.	1 Apt.	2 Apt.	3 Apt.	4 Apt.	5+Apt.	Total.
8	1,500	4,779	1,726	252	26	8,283
9	641	2,290	2,140	1,644	269	6,984
10	1,470	5,269	2,387	634	128	9,888
14	1,502	4,567	1,420	180	59	7,728
15	1,987	4,427	1,207	399	291	8,311
16	574	2,734	5,131	1,605	183	10,227
17	1,355	4,080	1,909	548	586	8,478
18	662	3,386	2,195	580	198	7,021
Total	9,691	31,532	18,115	5,842	1,740	66,920

It was found possible to represent to the Local Authority 54 houses as unfit for human habitation in terms of Section 16 of the Housing (Scotland) Act, 1930, while the Master of Works reported 11 properties, representing 168 houses, as being unsafe to the Dean of Guild Court, when demolition was ordered. That is, 222 families were rehoused on account of the unfitness of their dwellings. This is the highest number of houses dealt with in any one year since before the war, and while it is gratifying to record that these families are

now housed in circumstances very different from their previous accommodation, there can be no complacency when so many other families are still residing in equally unfit dwellings.

There was no addition to the number of properties abandoned by their owners in past years. The cost of repair to the Department in the eight properties previously abandoned amounted to £96 19s. 10d.

Twenty-nine properties containing 328 houses, the liability of which the owners desired to be relieved, were offered to the Corporation. After negotiations on ground burden, etc., six properties containing 64 houses were accepted, 12 refused and 11 were still under consideration at the end of the year.

The operation of the Housing (Scotland) Act, 1935, resulted in 1,465 families obtaining larger houses and involving the transfer of 7,680 units or 9,568 persons.

Subsequent inspection of the decrowded houses revealed that 1,281 or 82·13 per cent. were no longer overcrowded ; in 194 or 13·24 per cent. overcrowding was reduced ; in 18 or 1·22 per cent. overcrowding was unchanged, and in 35, or 2·38 per cent. it had increased.

Since the Act came into operation in 1935, 8,349 families have been accommodated in Corporation houses suitable for their needs. Of the houses decrowded a large number have long since become overcrowded again. This is to be expected in view of the general housing shortage.

Inspection of District Regulations.

The survey of the residential properties in the Division commenced in the latter part of 1948 was continued.

The object of the survey is to ascertain the precise condition of every property and house and to classify them according to specific standards. For this purpose a report card was prepared (see facsimile on pages 206-7) in which complete detail of the state of the property and of each house is recorded. The opportunity is being taken also to estimate the degree of overcrowding existing—the number of occupants in each house is noted.

While it is desirable that such a survey should be completed within a well defined period of time, it has not been practicable to do so because of the limitation of staff available for the task and the large number of houses to be inspected (66,920).

Since the survey started at the end of 1948 particulars of 1,675 properties comprising 16,290 dwelling houses have been recorded.

PROPERTIES AND HOUSES SURVEYED IN THE YEAR 1949.

Ward.	Prop-erties.	Houses. No. of Apartments. 1	2	3	4	5+	1949 Total.	1948. Total.	Grand Total.
8	64	—	132	113	4	—	249	1,912	2,161
9	12	28	60	10	2	—	100	—	100
10	879	913	4,439	2,245	587	194	8,378	573	8,951
14	331	746	1,936	701	84	31	3,498	6	3,504
15	94	524	410	28	8	—	970	—	970
16	6	23	27	—	—	—	50	—	50
17	16	67	94	19	—	—	180	—	180
18	33	78	258	20	3	1	360	14	374
Total	1,435	2,379	7,356	3,136	688	226	13,785	2,505	16,290

On completion of the survey in the 10th (Townhead) Ward the opportunity was taken to analyse the returns with regard to standards of housing and the degree of overcrowding existing.

The 10th (Townhead) Ward is one of the central wards of the city. It is largely residential with some light industries. Apart from an extension of the ward boundaries to include part of the old Provan Ward in 1948 its composition, so far as dwellings and business premises are concerned, has not changed materially since 1935, when a survey to estimate the degree of overcrowding then existing was carried out. For this reason it is eminently suitable for comparative purposes and to indicate trends in overcrowding and housing needs.

The ward extends to 301 acres with a population, including institutions, of 37,264 persons, giving densities of 123·8 persons per acre and 32 houses per acre. For the purpose of analysis the ward has been divided into three areas.

Area I bounded by Castle Street on the west, Alexandra Parade on the north, Firpark Street and Ark Lane on the east, and Drygate on the south ; and Area II bounded by Buchanan Street on the west, Parliamentary Road on the north, Castle Street on the east, and Rottenrow and Cathedral Street on the south, represents the area of the ward in 1935 ; and Area III bounded by Ark Lane, Firpark Street and Castle Street on the west, Royston Road on the north, Millburn Street, Broompark Terrace and Cardross Street on the east, and Duke Street on the south, represents the area added to the ward in 1948.

The characteristics of the areas into which the ward has been divided are markedly different, Area I having a large area occupied by the Glasgow Royal Infirmary and the Glasgow Necropolis, with residential property and light industries set around the periphery of the open area. Area II is densely built on with residential property, light industry and commercial premises mixed together, and Area III is dominated by Royston Hill and is largely made up of residential properties.

Four standards into which the dwelling houses are classified have been adopted, viz. :—

Standard Houses.—Houses of three apartments containing all modern conveniences, including separate water closet, bathroom, adequate food storage accommodation, and hot and cold water.

Note.—A number of houses of less than three apartments have been included where these contained all modern facilities.

Sub-Standard " A " Houses.—Houses that fall short in some degree of a standard house, but can be made up to standard houses.

Sub-Standard " B " Houses.—Houses which while not considered unfit are unsatisfactory and are not suitable for reconstruction under the Housing (Scotland) Act, 1949, and will therefore in time fall into the unfit category.

Unfit Houses.—Houses unfit for human habitation because of their defective design or the degree of sanitary defects existing.

Estimation of overcrowding has been based on two standards, viz :—

(*a*) Housing (Scotland) Act, 1935, 1st Schedule, which requires the permitted number of persons in each house to be as follows :—

Size of House.	Permitted No. of Persons.
1 apartment	2
2 ,, ...	3
3 ,, ...	5
4 ,, ...	$7\frac{1}{2}$
5 ,, ...	10

plus two persons for each additional room over five. (Floor area of the rooms is to be taken into consideration when computing the permitted number).

(*b*) Department of Health for Scotland Circular 194/44 which required a higher standard based on the recommendations of the Scottish Housing Advisory Committee's Report, viz. :—

2 bedroom houses for 4 persons ;
3 ,, ,, 6 ,,
4 ,, ,, 8 ,,

with an additional bedroom for every two persons.

In applying the formula in the present analysis a two-apartment house was considered to be a satisfactory house. (In their Circular 194/44 the Department of Health for Scotland do not envisage the provision of two-apartment houses).

Table I (on page 208) reveals wide variations in densities of population and of houses per acre in the three areas of the ward, and the need for considerable thinning out in Areas II and III where the densities are above the " Gross Residential Densities " adopted for the city by the Corporation in December, 1946.

Of the 9,737 houses in the ward, 6,381 or 65·5 per cent. fall short in varying degrees of what are considered desirable houses, and of these 786 or 8·07 per cent. are considered unfit for human habitation.

The problems of densities and unsatisfactory houses are greatest in Areas II and III of the ward.

Tables II and III (pages 209-10) reveals that under the 1935 standard, 2,905 or 29·83 per cent. of the houses are overcrowded and that under the 1944 standard 5,728 or 58·82 per cent. are overcrowded. The overcrowding is spread fairly evenly over the ward and, as is to be expected, occurs principally in the one-apartment and two-apartment houses—84 per cent. according to 1935 standard, and 83 per cent. according to 1944 standard. It is also noted that 50 per cent. of the families overcrowded was only by one half unit or one unit.

The number of families living in overcrowded conditions has been reduced by 6·5 per cent. since the survey made in 1935—no doubt some of the fruits of the housing effort of the past fifteen years.

The net number of houses required to produce satisfactory housing conditions in the ward is 6,381. In assessing this number a house overcrowded and unfit, one of the factors, has been ignored. An allowance has also been made for some of the displaced families in unfit houses being absorbed into the fit houses rendered vacant by decrowding. (See Table IV page 211).

The estimate of the houses required is based on a much higher standard than was envisaged at the time of the 1935 survey and in consequence the number of houses now required is greater.

At the time of the 1935 survey it was estimated that 1,496 houses were required to deal with unfit houses and overcrowding in the ward. (Areas I and II).

A large number of the houses that would be vacated in consequence of any operations would be absorbed in rendering Sub-Standard "A" houses into Standard houses. One and two-apartment houses combined to give three and four-apartment houses.

The densities of the ward would be materially affected, reducing those of Areas II and III to the limits envisaged by the Corporation in 1946 when they adopted the Gross Residential Densities of 18·5 houses per acre and 66 persons per acre for the inner zone of the city. Partial rebuilding could be carried out in Area I where the densities are reduced considerably below the densities approved.

The housing problem varies in each ward of the city and the analysis above cannot be used to assess the housing needs of the city as a whole, but it does indicate the magnitude of the problem

facing the authorities. No measurable period of time can be stated in which the problem will be solved. The best that can be looked for in the near future is that the worst of the unfit and the more grossly overcrowded houses will be dealt with.

Rent Restriction Acts.

Application for certificates of disrepair in dwelling houses during the year numbered 126, and of these 45 were granted, 78 refused, and 3 withdrawn. The high number of refusals is accounted for by the fact that when owners were notified of the application the disrepair was attended to immediately to the satisfaction of the applicant. Twenty-six applications for reports were granted to owners on completion of work specified on certificates issued to tenants.

Supervision of Rehousing Schemes.

Routine visitation to the 6,549 houses in the various rehousing schemes was carried out by the nurse inspectresses. In addition a large percentage of the houses in some of the intermediate schemes were visited. Conditions found compare favourably with those of previous years, although there is no diminution in the problem of the lodger family.

In the course of the year about 300 tenants in the rehousing schemes, on whose standard of housekeeping the nurse inspectress could report favourably, took advantage of the opportunity to transfer to houses in intermediate and ordinary schemes. These tenants had proved themselves fit to take their place in the community without further supervision by the Department.

The houses made available by the transfers were used for housing families from condemned properties.

Details of the visits made and conditions found are given in Table XVII.

Inspection of School Children for Verminous Conditions.

This Division is responsible for the routine inspection of the scholars in 29 schools and in one school annexe.

The schools were visited on 415 occasions and 18,489 boys and 15,215 girls examined.

The incidence of boys and girls found infested with vermin was slightly higher than in the previous year. When the condition was brought to the notice of the parents no time was lost in having it dealt with. Details will be found in Table XVII.

Factories Act, 1937.

Factories on the Register at December, 1949, numbered 1,133 and include :—

730 mechanical ;
315 non-mechanical ;
61 mechanical bakehouses ; and
27 non-mechanical bakehouses.

A total of 2,705 inspections were made and 308 defects were brought to the notice of the occupiers.

No difficulty was experienced in the operations of the Act and the hygienic standard in factory and sanitary convenience was found to be good.

A remarkable feature during the year was the sudden appearance in various parts of the Division of a new type of utility factory—the launderette. These premises provide for a speedy household clothes washing service. Clothes left while the housewife does her shopping are cleansed and partly dried for collection on her journey home.

This at least was the claim made when these first commenced operations.

The launderette is fitted out with a battery of washing machines of the household type to which is connected a supply of hot and cold water. Each washing is completed in twenty minutes, and charges ranging from 1s. 6d. are made. Whether the venture will be successful or not remains to be seen.

Sanitary Conveniences.

There is a slight reduction in the number of water closets used in common by tenants due primarily to the demolition of unfit properties.

Between 28,000 and 29,000 tenants share water closets and until housing conditions in the Division improve no material change is likely.

The following table indicates the distribution of water closets used in common :—

WATER CLOSETS USED IN COMMON BY TENANTS.

Ward.	Common to 2 Tenants.	Common to 3 Tenants.	Common to 4 Tenants.	Common to 5+Tenants.	Total.
8	197	925	241	14	1,377
9	199	477	111	15	802
10	455	682	393	83	1,613
14	377	834	298	59	1,568
15	184	754	312	134	1,384
16	129	232	130	5	496
17	88	902	171	18	1,179
18	144	543	110	8	805
	1,773	5,349	1,766	336	9,224

There are 43 dry closets, including chemical closets, in use. These exist in areas where no drainage facilities are available and are being maintained in good condition. No privy middens remain in the Division.

Five one-apartment and 27 two-apartment houses are without an internal water supply.

JOHN D. ARTON
DIVISIONAL SANITARY INSPECTOR.

HOUSING SURVEY

Position	Type	Apts.	Access	Water	W.C.	Bth.	Hot Water Spply	Food Press	Coal Store	Light	Venti-lation	*Tenant Units.*				*Lodger Units.*				Sub-Let
												Adult		*Child*		*Adult*		*Child*		
												M.	*F.*	*M.*	*F.*	*M.*	*F.*	*M.*	*F.*	

OTHER INFORMATION :—

INSPECTED BY :— DATE :—

REINSPECTED BY :— DATE :

CORPORATION OF GLASGOW—PUBLIC HEALTH DEPARTMENT

HOUSING SURVEY.

No.	*Division.*	*Ward.*

ADDRESS

OWNER

FACTOR

ASSESSED RENTALS

TYPE OF PROPERTY

SITUATION AND ENVIRONMENT

NO. OF HOUSES AND BUSINESS PREMISES.

Business.	1 *Apt.*		2 *Apt.*		3 *Apt.*		4 *Apt.*	5+ *Apt.*	*Total.*
	B/B	*T/T*	*B/B*	*T/T*	*B/B*	*T/T*			

SUMMARY OF POPULATION.

	No.	*Adult.*		*Child.*		*Overcrowding.*	
		M.	*F.*	*M.*	*F.*	1935	1946
TENANT UNITS							
LODGER							

ACCESS TO PROPERTY.....

LIGHTING.....

VENTILATION.....

DETAILS OF W.C. ACCOMMODATION AND DRAINAGE

Basment .....
Ground .....
1 up .....
2 up .....
3 up .....

SUMMARY OF W.C.'s.

In House .....
Outside .....
Common 2 .....
Do. 3 .....
Do. 4 .....
Do. 5+ .....

TYPE OF COURT ..... REFUSE DISPOSAL ..... WASHHOUSE .....

ASSESSMENT OF DISREPAIR.....

WALLS .....

CHIMNEY HEADS.....

ROOF .....

PLASTER .....

WOODWORK.....

STANDARD ..... OTHER INFORMATION .....

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TABLE I.

Densities, Classification and Sizes of Houses in 10th (Townhead) Ward.

Area.	Acreage.	Population.		Persons per Acre.	Houses per Acre.	Classification of Houses.				Sizes of Houses in Apartments.					Total Number of Houses.
		Residential	Institutional			Standard.	Sub-Standard A.	Sub-Standard B.	Unfit.	1	2	3	4	5+	
I	82	4,476	1,526	73·2	15	116 9·36%	377 30·42%	660 53·27%	86 5·94%	141	670	312	99	17	1,239
II	93	17,054	—	183·38	50	520 11·11%	750 16·03%	3,068 65·58%	340 7·26%	597	2,358	1,156	404	163	4,678
III	126	13,626	582	112·76	30	632 16·54%	961 25·15%	1,867 48·87%	360 9·42%	590	2,171	917	113	29	2,820
Total Ward	301	35,156	2,108	123·8	32	1,268	2,088	5,595	786	1,328	5,199	2,385	616	209	*9,737

* This figure does not include 151 rooms occupied by families in Multiple Occupancies

TABLE II.

Number of Houses Overcrowded in 10th (Townhead) Ward.

Area.	Number of Houses Overcrowded according to 1935 Standard.							Number of Houses Overcrowded according to 1944 Standard.							Degree of Overcrowding in Units according to 1935 Standard.														
	Apartments.							Apartments.																						
	1	2	3	4	5+	Total	Per-cent.	1	2	3	4	5+	Total	Per-cent.	½	1	1½	2	2½	3	3½	4	4½	5	5½	6	6½	7	7½
I	68	192	34	2	—	296	23·89	141	408	70	7	—	626	50·52	88	92	40	27	21	12	2	10	2	—	1	1	—	—	—
II	215	898	167	36	11	1,327	28·37	597	1,604	389	86	24	2,700	57·74	308	414	176	171	85	72	29	35	7	16	4	4	4	2	—
III	304	759	203	16	—	1,282	33·56	590	1,415	365	32	—	2,402	62·88	322	414	165	158	87	51	28	27	5	12	4	5	3	—	1
Totals	587	1,849	404	54	11	2,905	29·83	1,328	3,427	824	125	24	5,728	58·82	718	920	381	356	193	135	59	72	14	28	9	10	7	2	1

TABLE III.

Comparison of Overcrowding as shown by 1935 and 1949 Surveys.

(Areas I and II of the present Ward 10 being Townhead Ward previous to Alteration of Boundaries).

Survey	Acreage	Population.		Persons per Acre	Hous's per Acre.	No.* of Hous's	Sizes of Houses in Apartments.					Number of Houses Overcrowded (1935 Standard).							Degree of Overcrowding in Units.													
		Residential.	Institutional.				1	2	3	4	5+	Apartments.							½	1	1½	2	2½	3	3½	4	4½	5	5½	6	6½	7	7½
												1	2	3	4	+5	Total	%															
Ward in 1935	175	25,864	1,606	156	34	6,001	715	3,199	1,455	500	132	280	1,310	426	59	18	2,093	34·9	415	687	225	301	139	143	69	52	25	21	8	5	2	1	—
Areas I and II 1949	175	21,530	1,562	131	33	5,917	738	3,028	1,468	503	180	283	1,090	201	38	11	1,623	27·43	396	506	216	198	106	84	31	45	9	16	5	5	4	2	—

* Since 1935 there has been a net decrease of 84 houses in the area under consideration, 338 houses having been demolished or closed, and 254 added, mainly by sub-division of large houses.

TABLE IV.

SUMMARY.

	Area I. Apartments. 1	2	3	4	5+	Area I. Total.	Area II. Apartments. 1	2	3	4	5+	Area II. Total.	Area III. Apartments. 1	2	3	4	5+	Area III. Total.
Houses Surveyed—																		
Standard	—	—	34	69	13	116	—	18	178	199	125	520	—	101	414	99	18	632
Sub-Standard "A"	3	155	196	22	1	377	4	296	374	71	5	750	25	512	354	12	8	961
Sub-Standard "B" (Unsatisfactory Houses)	70	500	79	8	3	660	442	1,898	572	124	32	3,068	387	1,329	146	2	3	1,867
Unfit (Unsatisfactory Houses)	68	15	3	—	—	86	151	146	32	10	1	340	178	179	3	—	—	360
	141	670	312	99	17	1,239	597	2,358	1,156	404	163	4,678	590	2,171	917	113	29	3,820
Houses Overcrowded (1935 *Standard*)—																		
Standard	—	—	—	2	—	2	—	5	11	13	9	38	—	27	127	16	—	170
Sub-Standard "A"	1	48	18	—	—	67	—	92	39	8	—	139	16	196	48	—	—	260
Sub-Standard "B"	28	140	16	—	—	184	151	729	107	11	2	1,000	178	469	28	—	—	655
Unfit	39	4	—	—	—	43	64	72	10	4	—	150	110	87	—	—	—	197
	68	192	34	2	—	296	215	898	167	36	11	1,327	304	759	203	16	—	1,282
Houses Overcrowded (1944 *Standard*)—																		
Standard	—	—	3	3	—	6	—	9	33	32	18	92	—	63	203	32	—	298
Sub-Standard "A"	3	103	40	3	—	149	4	187	119	16	—	326	25	356	98	—	—	479
Sub-Standard "B"	70	295	27	1	—	393	442	1,301	221	33	6	2,003	387	869	63	—	—	1,319
Unfit	68	10	—	—	—	78	151	107	16	5	—	279	178	127	1	—	—	306
	141	408	70	7	—	626	597	1,604	389	86	24	2,700	590	1,415	365	32	—	2,402
Houses required to Rehouse Tenants of Unsatisfactory Houses and to abate Overcrowding—																		
(1935 Standard)	...	...	...	...	...	815	...	...	...	...	...	3,585	...	...	...	...	...	2,657
(1944 Standard)	...	...	...	...	...	901	...	...	...	...	...	3,826	...	...	...	...	...	3,004
Number of Fit Houses rendered Vacant by Decrowding—																		
(1935 Standard)	...	...	...	...	...	69	...	...	...	...	...	177	...	...	...	...	...	430
(1944 Standard)	...	...	...	...	...	155	...	...	...	...	...	418	...	...	...	...	...	777
Net Number of New Houses required	...	...	...	...	...	746	...	...	...	...	...	3,408	...	...	...	...	...	2,227
Conditions after Rehousing and Demolition of Unsatisfactory Houses—																		
Net Number of Houses remaining in Ward	...	...	...	...	...	493	...	...	...	...	...	1,270	...	...	...	...	...	1,593
Number of Houses per Acre	...	...	...	...	...	6	...	...	...	...	...	13·54	...	...	...	...	...	12·64
Estimated Number of Persons in Ward	...	...	...	...	...	2,620	...	...	...	...	...	6,350	...	...	...	...	...	7,465
Estimated Number of Persons per Acre	...	...	...	...	...	31·95	...	...	...	...	...	68·39	...	...	...	...	...	59·25

EASTERN DIVISION.

The redistribution of the ward boundaries has resulted in a great increase in the acreage of the Eastern Division. The added area stretches from Blackhill and Carntyne on the west to Bargeddie and Gartcosh on the east, from Lightburn and Barlanark on the south to include Millerston, Hogganfield and Cardowan on the north. The division is now 8,855 acres in extent and has an estimated population of 230,694.

As the new (No. 7) Provan Ward has a population density of only four persons per acre, a corresponding fall in the density of population within the division is noted—the new figures being 27·18 persons per acre compared with the 1947 figure of 56·69 persons per acre.

Provan Ward is almost wholly rural and among the problems encountered was the pollution of the Easterhouse and Tollcross Burns. This nuisance concerned a piggery otherwise ideally situated in a rural area. The drainage effluents were so concentrated when compared with the volume of water in the Easterhouse Burn that dilution was not sufficient to prevent deposits of sludge occurring on the banks of both burns receiving the effluents.

Consultations with the manager of the piggery followed and eventually agreement was reached to enlarge the existing settling tank by having it deepened to an average depth of four feet. Steps were promptly taken to have this done and baffle plates built in the tank to lower the speed of flow, thereby assisting the settling of solids.

This work is now completed and although an improvement in the composition of the effluent is already evident, a trial period must be allowed before its efficiency can be judged.

A complaint of excessive dust arising from two stone quarries and settling in dwelling-houses was another nuisance which caused anxiety. Observations carried out showed that the complaints were well founded. Two dwelling-houses and an institution were concerned. As the two dwelling-houses were in close proximity to one of the quarries naturally complete removal of the nuisance is most difficult to obtain. However, since the area comes within certain lands which are being planned for further development by the Local Authority Planning Committee and the quarries have thereby only a limited period of further operations, it was decided that remedial measures such as adequate wetting of the

materials before crushing and screening and water spraying of the surface area in the region of the crushing machines should be carried out.

One of the major problems in the administration of this area is the lack of adequate transport facilities. Some of the main roads have transport services at hourly intervals while on many of the subsidiary roads no transport service is available and long distances must be travelled on foot. This presents great difficulty in maintaining adequate supervision of an area of over 4,000 acres.

Abandoned properties are still in much the same position as last year. Although few additions have been made during the year, since only repairs of an urgent nature are carried out by the Local Authority the progressive deterioration resulting from this neglect of normal maintenance repairs in the existing houses is rapidly approaching a state where they will be completely uninhabitable. Supervision of the tenants is maintained by the district inspectors to ensure that any acts liable to cause a nuisance are discontinued before they become a habit.

Nuisance inspections in terms of the Public Health (Scotland) Act, 1897, takes up much of the inspectors' time. Regular and frequent visits must be made in order to have the nuisances removed or abated as quickly as possible. Tenement properties—of which there are a great number in the Eastern Division—provide the greatest number of nuisances, sanitary fittings and drainage systems forming the bulk of complaints received. It is noticeable here that the older tenements where there are a great number of disconnecting traps between waste water conductors and main drainage systems give the most trouble. In the Corporation housing scheme areas, fewer officers are required per head of population by reason of the fact that fewer nuisances are found, with a corresponding reduction in the number of revisits required for the abating of nuisances. This comparison holds good not only for ordinary and intermediate type schemes but also for rehousing or slum clearance schemes which receive families from the very worst tenements in the city.

It follows from this experience that as more and more old houses are replaced the number of nuisances will drop and there is also a case here for the revision of local bye-laws and building regulations as these housing schemes were in many respects outwith the control of local bye-laws due to the Government subsidies granted to meet the cost of their erection. Re-arrangement of drainage systems and fittings

which reduce the incidence of nuisances must be in the public interest and any legislation which can assist in this improvement should receive support.

In the detection of nuisances and their subsequent removal, 141,563 visits were made by the inspectors and the number of nuisances removed was 12,321. These figures are almost on a parallel with the figures reported in 1948.

There were 1,345 visits to dietetic water storage cisterns and where they were found to be in need of cleansing, notices to that effect were served on the respective owners. All such notices received prompt attention and no further action was necessary.

Cleansing of Common Stairs and Passages.—The supervision and enforcement of stair cleansing calls for constant vigilance on the part of the inspector. A good and well kept close or common stair often reflects the type of person living in the tenement, and conversely where such cleansing is being neglected one usually finds the tenants difficult to deal with. However, where possible the difficulties are overcome by tact and persuasion and only in the event of stubborn refusal to comply with the bye-laws is recourse to legal action necessary. Visits to the number of 3,220 to dirty closes or stairs were made ; 797 verbal warnings were given, and 705 rotation cards were served. Six cases of failure to cleanse the close or stair were taken to court and in three cases fines of £1 each were imposed ; the other three were admonished.

Drainage.—In dealing with both old and new drainage systems, 2,635 visits were made and the number of tests applied was 334.

Rent Restrictions Acts.—The drop noticed last year in the number of applications for certificates in terms of the Rent Restrictions Acts was continued during 1949 and is probably due to the realisation now gaining ground that a certificate carries no priority for rehousing purposes. A total of 20 applications for certificates was received, of which 12 were granted. Eight applications were refused on the grounds that no disrepair was found or that the repairs necessary were promptly carried out by the owners on receipt of notification of the existence of the disrepair.

One application for a report was made by an owner as the repairs had been carried out and after inspection of the house the report was granted.

Housing.—The number of new houses built within the Division is only slightly lower than the number built in the previous year and although both of these figures are unimpressive, they do not adequately reflect the position with regard to new housing within the city as a whole. During the year 463 new houses were completed and two sets of premises converted to dwelling-houses. New houses are made up as follows :—

Weir Steel Houses ...	...	...	70 all of 4 apartments.
B.I.S.F. Houses ...	...	...	188 all of 4 apartments.
Aluminium Permanent	...	...	205 all of 3 apartments.
Converted Premises	...	...	3 houses of 3 apartments.

Families decrowded in terms of the Housing (Scotland) Act, 1935, number 1,069 and of these follow-up visits showed that 222 of the vacated houses again became overcrowded by the incoming families. This year's figure of 20·76 per cent. when compared with last year's figure of 23·53 per cent. shows that the downward trend in the number of houses again becoming overcrowded is maintained. This, however, does not take into account the normal growth of families which may result in some of the 79·24 per cent. houses becoming overcrowded in the course of two or three years.

There were no representations for demolition or closing orders during the year and no consideration can yet be given to the forming of clearance areas.

Offensive Trades.—The redistribution of the ward boundaries brought five more offensive trades within the jurisdiction of the Eastern Division. These businesses comprise two bone boilers, two tallow melters, and one manure manufacturer. There were also three businesses removed from the register as the period they had been out of business exceeded that permitted in terms of the Public Health (Scotland) Act, 1897, and consequently the sanction of the Local Authority had automatically lapsed.

By the end of December, 1949, there were 41 offensive trades on the register—31 of them operating as individual businesses and 10 being concentrated with nucleus factories in accordance with the Government scheme.

There were 254 visits made to offensive trades during the year and in the course of these visits 28 nuisances were brought to the notice of the owners. In no case was it necessary to take any further measures for the removal of the nuisances. The nature of these businesses

renders them particularly liable to infestation by rodents and flies and every effort is made to obtain the co-operation and confidence of the persons responsible to ensure that the most up-to-date methods are adopted. This approach to the problems operates very satisfactorily to both sides.

Common Lodging Houses.—The number of common lodging houses in the Division remains the same as last year, that is five houses for males, two houses for females and one boarding-house for seamen. The total sleeping capacity is for 2,344 persons. During the year 256 visits were made and five defects were found. The defects were immediately notified to the lodging-house keepers and were satisfactorily dealt with. The houses are well ordered and well maintained, giving little cause for complaint.

Farmed-out Houses.—There are 98 farmed-out houses in the Division. This type of house requires a great deal of supervision owing to the nature of the let to the various occupiers and the type of persons who usually occupy the houses. During the year 456 visits were made and resulted in 10 nuisances concerning disrepair, choked drains and bed bug infestation being discovered. This early detection of nuisances and their immediate removal undoubtedly prevents much more serious conditions from developing.

Piggeries.—In the re-arrangement of the ward boundaries, 13 additional piggeries were brought within the area of the Eastern Division bringing the total up to 20 at the end of the year. Little trouble is experienced in the supervision of the piggeries as the owners without exception have shown great willingness to co-operate with the inspectors in having defects promptly attended to. In 199 visits, only 20 nuisances were found and these were dealt with when brought to the notice of the owners.

Sanitary Conveniences used in common.—No comparison with last year's figures can be made as additions have been made to the totals by reason of the change in ward boundaries. The number of common w.c.'s in use is 9,502, dry closets number 53, and privy middens, one. Houses without sink and water supply number 65, and ash-pits remaining in use number 21. There are now 92 septic tanks within the Division and they are visited at regular intervals to ensure that they are operating in a satisfactory manner. The number of houses with inside bath and w.c. accommodation is now 24,814, or 40·6 per cent. of the total houses in the division.

Factories.—New factories registered during the year and the total number on the register at 31st December, 1949, are as follows :—

	Factories		Bakehouses	
	Mechanical	Non-Mechanical	Mechanical	Non-Mechanical
New	57	5	3	1
Total	833	137	62	27

Number of Factories in the Division—1,059.

The total number of visits made by the inspectors was 3,388. This resulted in the detection of 317 nuisances or contraventions of the Factories Acts and to their speedy removal on being brought to the notice of the persons responsible.

There were no cases for prosecution as all defects were attended to without incident.

Shop visits numbered 200, resulting in 44 nuisances being found and immediately remedied.

Rat infestation.—The rat extermination campaign continues to be successfully carried out and the number of rats killed, 3,106—roughly one-half the number killed the previous year—indicates the success of the campaign.

No black rats were included in the kills, only brown rats being found.

Number of premises showing evidence of rats and treated—

Dwelling-houses	93
Food premises	33
Other premises	182
Sewers (Manholes)	18
Total	326

This downward trend in the number of rats killed during the year conforms to the expectations expressed in previous reports. Major infestations have been dealt with so successfully that only minor pockets remain. It is felt that the position is now well in hand in the Eastern Division, and while sporadic outbursts will occur for many years, it is unlikely that infestations will again be found on the scale of some four to five years ago. While satisfaction can be expressed at

the work carried out, vigilance will have to be continued and every effort made to ratproof premises where rats have been found and exterminated. It is not sufficient to kill off the existing rat population. Steps must be taken to ensure, so far as practicable that infestation is not permitted to take place again. The measures adopted for ratproofing are not usually very expensive, even in old tenement properties, and the money spent on this work is well repaid.

Tents, Vans and Sheds.—There is one case pending court proceedings where a caravan was being used in contravention of the Local Authority bye-laws. The case concerned two old people who had been permitted by the owner of a yard to park the caravan in the yard and at the same time act as caretakers. The sanction of the Local Authority had not been asked and when the assistant inspector discovered that the van was being occupied as a dwelling, the owner of the yard and the two occupants were immediately notified to terminate this occupancy.

The owner of the yard asked for a period of grace to enable the occupants to find alternative accommodation and this was readily granted, together with extensions from time to time. However, it soon became obvious that no real effort was being made to find alternative accommodation and that so long as extensions were granted there was no intention of removing the caravan. Finally the owner of the yard was informed that legal proceedings would be instituted and only then did he make formal application for the use of the caravan. As the site was unsuitable, this application was refused and legal proceedings were started. The case has now been heard in court and the defendant pleaded guilty but stated he was appealing against the decision of the Local Authority to refuse permission for the use of the caravan. Consequently the case was continued and the Sheriff's decision is not yet known.

It was noted that on a previous occasion, this person had committed a similar offence and only had the caravan removed when legal proceedings had been started.

There are six permanent sites in the Division where permission for the occupation of caravans, etc., is granted. One of these sites is used as a more or less permanent parking place by travelling showmen and their families. Approximately 60 caravans were used in the Division during the year and 201 visits were made. Apart from the case reported, only four nuisances or contraventions of the bye-laws were found and these were promptly dealt with.

Squatter Families.—There has been an increase in the number of squatter families in the Division and this is not entirely due to the new areas that have been added. The number is now 42 compared with 24 in the previous year. Regular inspections are carried out in order to maintain supervision and to ensure that any nuisances that arise are immediately abated or removed. Squatter families are still occupying condemned property at 7 Largs Street so that although the property is ordered for demolition no action can be taken.

Every effort is now being made in co-operation with the Master of Works and other Departments to ensure that condemned houses are partially demolished as soon as they become vacant to prevent their occupation by squatter families. In a few cases the squatters have taken over tenancy of some of the better properties they occupied and the factor has issued rent books. Where the properties are in good habitable condition, this has been accepted as a good solution to the problem and no objection has been raised by this Department.

Elderly Persons.—Anxiety is being felt for the numbers of elderly people who are found to be incapable of looking after themselves and fall to be classed as being in need of care and attention. Such cases are by no means easily dealt with. Where they are suffering from chronic disease or, being infirm or physically incapacitated, are living in insanitary conditions and are not receiving proper care and attention either from themselves or other persons, they may be removed to hospital on a certificate from the Medical Officer and a court order.

It will be realised that many cases are found where the above conditions do not fully apply and it falls to the lot of the Health and Welfare officials to obtain the most satisfactory solution to the problem. Usually this is done by having the house inspected by an assistant sanitary inspector or a health visitor. Where the person concerned cannot be removed to hospital, every effort is made to contact relatives and assistance is given by having bed clothes, etc., cleansed and putting the people in touch with the Home Help Service.

Where infestations of vermin have occurred the infestation is dealt with by this Department free of all charge.

Nurse Inspectors.—Rehousing scheme visitations by the nurse inspectors totalled 32,260, which included visits to 1,166 dirty houses and 95 cases where bed bug infestations were found. All the dirty

houses were cleansed without recourse to legal action and the bed bug infestations were eradicated by the Pestology Section of the Department.

Visits to houses in intermediate schemes numbered 116, mostly in connection with complaints, and the number of dirty houses dealt with was 39. No case of bed bug infestation was found.

For the purpose of examining school children for the presence of vermin and other diseases 405 school visits were made. Altogether 16,018 boys and 16,739 girls were inspected and 6,474 cases were found in need of attention. In 234 cases written notices concerning the condition of the children were necessary but eventually satisfactory results were obtained in all cases. As a direct result of these school examinations 4,490 follow-up visits were made to the homes concerned and by giving advice and instructions on good housekeeping and home management, many excellent results were obtained.

This branch of the work calls for tact and perseverance on the part of the nurses but the results show that the efforts are well worth while and the children derive very great benefit as a result of improved conditions.

ALEXANDER EASTON,
DIVISIONAL SANITARY INSPECTOR.

SOUTH-EASTERN DIVISION.

The housing situation still remains acute. The rapid deterioration of property, mainly the result of the inability of owners to meet the heavy maintenance costs, provides many administrative difficulties. In ever-increasing numbers properties are being offered to the Local Authority or abandoned and the cost of maintaining this latter type in a sanitary condition then falls upon the Local Authority. In one such property containing eight five-apartment houses, of which all but one are let out in rooms, repairs and improvements were carried out by the Corporation at a cost of slightly over £1,000. The work included stripping and reslating the roof, rebuilding a chimney head and replastering many of the ceilings on the top floor. It also included the installation of a sink in the common lobby of each of the sub-let houses for the use in common by the occupiers of the apartments.

The inadequacy of water supplies in the sub-let houses was revealed in a survey carried out during the year. In 153 houses the sub-tenants had no sources of water except sinks in occupied kitchens or taps in compartments also containing water closets.

The problem of water supply for the sub-tenants of sub-let houses might have been solved if they had been declared farmed-out houses which must, in terms of the bye-laws governing them, have a sink and water supply in every apartment separately occupied. This solution was not tried because for years it was impracticable to propose large-scale installations and because modified arrangements, such as access to an unoccupied kitchen, seemed attainable. Also, it was not desirable to re-instate single-roomed houses nor to stigmatise their occupants but continuous efforts to keep the kitchens empty have failed.

The Glasgow Police (Amendment) Act, 1890, Section 30, enacts that the owner of every house into which water has not been introduced shall provide an ample supply convenient for such house, together with a sink and waste pipes connected to the sewer to the satisfaction of the Corporation. The Water (Scotland) Act, 1946, enacts similarly. These requirements were met in the houses as originally occupied, but the mode of occupancy has changed. In view of this change it appeared justifiable to require that a new common supply be installed in all sub-let houses where (*a*) the sub-tenant had no water sources except sinks in occupied kitchens or taps in compartments also containing a water closet ; (*b*) the installation was practicable and of reasonable cost ; and (*c*) it could be fitted in a convenient position and with a sink and proper connection with a drain. In some cases it would only be necessary to alter the position of a sink and in others to divide the bathroom so as to separate the water closet from the tap compartment.

The landlords of all such houses were requested to install a sink in each case. Unfortunately this was carried out in very few houses. The reason for the non-compliance was that the tenants had contravened the terms of missives. As the houses already possessed a sink the matter could not be pursued legally. Consequently it is now desirable :—

(1) that authority be given to proceed against principal tenants and non-resident lessees ;

(2) that where there is non-compliance the Corporation should make the installation, recovering the costs by increased rating or other means ; and

(3) that the Corporation should make the installations in the ownerless houses.

It is now necessary to have the legal position on the above points clarified with a view to having sinks fitted by tenant or landlord.

General Nuisances.—The total number of nuisance visits returned during the year was 69,103, resulting in the discovery and removal of 7,648 nuisances. These are of the usual varied assortment, the details of which can be found in Table XVII of the Appendix. Nuisances are for the most part discovered by the inspectors during routine inspections or by verbal complaints while in the district, but many complaints are lodged with the Department by letter, telephone and personal visit, showing that the services of the Department are appreciated. An analysis of the complaints registered is shown in the accompanying table.

Heavy overhead charges make the maintenance of property a burden and in some older properties a liability and in spite of the belief that the policy of " a stitch in time saves nine " is a sound one, many proprietors are unable to do more than the minimum of essential repairs. This makes the removal of nuisances somewhat difficult and increases the work of the district inspectors. No nuisances worthy of special mention occurred during the year.

It was necessary to serve 73 statutory notices in terms of Section 20 of the Public Health (Scotland) Act, 1897, in order to secure the removal of nuisances. In 13 instances where no action resulted, they were followed by court proceedings. Each case was successfully fought and the work carried out by order of the Sheriff, in nine cases by the Local Authority and in the remaining four by private tradesman.

Type of Nuisance.	Number.
Choked drains with resultant flooding	406
Defective sanitary and water fittings	403
Dirty closes and stairs	320
Smoke pollution	217
Dampness in dwelling-houses	415
General disrepair in dwelling-houses	341
Insect infestation	223
Rat infestation	303
Offensive odours	123
Miscellaneous	340
Total	3,091

Washing and Bathing Facilities.—As a general rule the person who does the type of work which calls for frequent if not daily bathing lives in a house without facilities for this. An examination of the position in relation to the internal baths and internal or external provision for washing clothes was made during the year, the results of which can be seen in the table on page 224.

This table illustrates that in the Hutchesontown and Gorbals Municipal Wards there are 18,757 houses of which only 1,316 are provided with baths, while in the three outer wards of Camphill, Langside and Cathcart with an almost comparable number of 20,506 houses, there are 18,214 with and only 1,292 without baths. Furthermore, in the Gorbals Ward many of the larger houses have been converted to multiple occupancies and within a large number of these houses the baths have become unusable. It will be seen that in Hutchesontown 74 per cent. and in Gorbals 85 per cent. of the houses have neither private nor communal facilities attached for the washing of clothes which compare very unfavourably with the other divisional wards.

It is estimated that the adult divisional population of 76,600 between the ages of 15 and 60 years are dependent on facilities outside their homes for adequate bathing and 28,200 families are without private or tenemental means for washing clothes.

Five municipal wash-houses and bathing establishments are distributed throughout the Division. Facilities can be provided in the individual baths for 1,215,864 users at half-hourly intervals during the year. The actual number of bookings made, however, was only 264,869, which falls considerably short of the permissable total. The reason for this is largely attributed to the fact that the general public can only avail themselves of the opportunity of a bath after working hours. Even if the 76,600 adults without domestic baths took advantage of the municipal accommodation working to capacity, it would only be possible to provide each person with the use of a bath fifteen times per year.

In the washhouses 290,145 bookings were made during the year which would permit accommodation on eleven occasions annually for each of the 25,824 families without private facilities. The recent innovation by private firms of installing washing machines in premises for hire by the hour must have relieved peak period congestion at the municipal establishments. There are, however, no figures for these private premises but our experience shows they are well patronised.

There is no doubt that the people like to be clean in body and in raiment and it is unfortunate that so many living in small houses have no chance of acquiring private baths and washing accommodation. While public baths and washhouses are excellent in themselves they are, of course, much less satisfactory than properly equipped homes.

Municipal, Communal and Private Facilities for Bathing and Domestic Washing.

Municipal Wards.	(25) Hutcheson-town	(26) Gorbals	(33) Camphill	(34) Pollok-shaws	(35) Govanhill	(36) Langside	(37) Cathcart	Total
Population	33,962	38,575	17,797	27,198	29,270	17,265	29,946	194,373
Number of Houses	9,414	9,343	5,786	8,056	8,841	5,227	9,493	56,160
Houses with Baths	653	663	4,940	5,248	3,848	4,922	8,352	28,626
Houses without Baths	8,761	8,680	846	2,808	4,993	305	141	27,534
Houses with Private Washing Facilities	322	8	731	4,598	1,249	1,061	7,261	15,230
Houses with communal Washing Facilities	2,110	1,350	2,672	1,578	3,408	2,776	1,212	15,106
Houses without Private or Communal Facilities	6,982	7,985	2,383	1,880	4,184	1,390	1,020	25,824
Municipal Establishments ...	1	2	—	1	1	—		149
Individual Baths	26	31	—	42	50		—	5
Domestic Washings Done ...	100,673	56,730		63,013	69,729	—		290,145
Baths Taken	45,815	58,898		46,143	113,993		—	264,869
Maximum Half-hourly Annual Bathing Periods	154,128	267,592		362,544	431,600		—	1,215,864
Estimated Adult Population dependent on Public Baths ...	22,600	26,940	2,160	8,500	15,500	600	300	76,600
Estimated Families dependent on Public Washhouses ...	7,500	8,500	2,600	2,200	4,500	1,600	1,300	28,200

Pollution of Streams.—A survey of the pollution of streams and rivers entering the Division from the Counties of Lanark and Renfrew was started at the latter end of the year. Evidence of sewage pollution was found in each of the water courses in samples of water submitted for analysis. The survey is being continued into 1950 and will be reported fully when completed.

Factories Act Inspections.—The divisional factory register is made up as shown in the undernoted table. Regular inspections totalling 3,668 were carried out, resulting in 278 defects being notified and remedied. These comprised the usual varied assortment of complaints. An endeavour was made to improve the ventilation of the sanitary conveniences in many factories which was not possible hitherto owing to shortage of materials. In this connection provision was made to ventilate the conveniences to the outer air in 47 cases.

The quinquennial inspection of basement bakehouses fell due this year and an inspection of the two premises within this category was carried out. As both had been maintained in a satisfactory condition it was recommended that a further period of five years be granted.

Ward	No. on Register at 31.12.49. Bakehouses.				New Registrations, 1949. Bakehouses.				Removals, 1949. Bakehouses.			
	M.	N.M.	M.	N.M.	M.	N.M.	M.	N.M.	M.	N.M.	M.	N.M.
25	84	26	8	8	19	5	1	1	2	3	—	—
26	264	150	22	7	41	17	1	—	20	17	—	—
33	57	59	7	4	4	6	1	—	—	1	—	—
34	92	24	7	4	8	1	—	—	1	1	—	—
35	70	30	6	2	4	2	—	—	—	—	—	—
36	33	25	6	2	6	—	—	—	1	—	—	—
37	46	16	5	1	4	—	—	—	—	3	—	—
Total	646	330	61	28	86	31	3	1	24	25	—	—

M. = Mechanical. N.M. = Non-Mechanical.

Common Lodging Houses.—There is now only one common lodging house in the division which is owned by the Corporation. It has accommodation for 360 males and is maintained in good condition.

Rat Infestation.—Under this heading 5,776 visits were made throughout the Division. As can be expected the majority—4,952 visits—were recorded against the more densely populated and congested inner wards where the menace appears to be endemic.

In addition to the many backcourts, basement cellars, disused washhouses, etc., dealt with, 368 dwelling-houses were found to be infested in varying degrees. Great difficulty is still being experienced in making the older properties rat-proof owing to the impracticability of the task and the high cost. During the year 5,304 rats were killed—3,770 by traps, 973 by poison and 561 by gas.

Rent Restrictions Acts.—Applications for certificates under the Rent Restrictions Acts were received from 123 tenants, this being a considerable increase over the previous year's total of 35. Of the applications received, 53 were granted, 45 were refused, and 4 were withdrawn on completion of work prior to going to committee. The remaining 21 were carried forward to the following year. Two reports were granted on request.

Limewashing of Closes and Staircases.—Under this heading 3,116 inspections were carried out, resulting in 329 notices being issued to property owners. In 142 instances limewashing was carried out before the end of the year and 942 properties were cleansed voluntarily.

Piggeries.—Regular inspections were carried out of the piggeries during the year and all with one exception were found to be satisfactorily maintained. One application was objected to owing to the failure of the owner to provide a suitable drain from the sty. The licence was withheld.

Verminous Children.—In connection with the examination of school children 136 visits were made to schools during which 13,897 children were examined. It was regrettable to record that of this number 141 were found to be infested with vermin and 2,334 infected to a lesser degree. The homes of the infested children were visited with a view to an improvement being effected. This was not always possible as in not a few instances other members of the families were the sources of infestation and not the school children.

Dirty Houses (Glasgow Police Order) 1904.—Evidence of the vigilance exercised over the rehousing schemes is shown by the fact that of the 4,282 visits made, only 15 houses were found to be dirty. The systematic visits to other houses and the house-after-school visits also carried out by the nurse-inspectors revealed that only 8 houses were found to be dirty out of 1,859 visited. Following subsequent visits to the backsliders it was necessary to issue notices to 7 offenders.

Court proceedings were instituted against one tenant—a second-hand dealer who lived in the rear of his shop. The dealer, a coloured man, refused to clean his house or shop when called upon. He was found guilty and ordered to clean his premises. On his re-appearance in court he was admonished when the court was satisfied that the order had been complied with.

WILLIAM RAE,
Divisional Sanitary Inspector.

SOUTH-WESTERN DIVISION.

Conditions in the Division did not change a great deal during the year, the bulk of the nuisances being defective sanitary fittings and general disrepair in property. Quite a number of tenement buildings were showing the result of neglect due to war-time restrictions on repairs and have rapidly deteriorated into the uninhabitable class, and in many cases had become so dilapidated that they required to be dealt with as dangerous by the Dean of Guild. A restart in slum clearance in the Orkney Street/Neptune Street area was welcomed and helped to remove several buildings in one of the black spots in the Division.

The D.D.T. Unit decided to try an area experiment for cockroach destruction and one comprising part of Craigton Road, Nimmo Drive, Crossloan Road and Elderpark Street was chosen as being typical, having 320 houses, shops and factories, including a large bakery. Every part of the area was examined for infestation and requests made to the owners or occupiers to co-operate. In addition, circulars explaining the scheme were distributed. The factors agreed to supply tradesmen to open up woodwork where necessary and the local newspaper assisted with a great article in our favour carrying headlines such as " Health Department Declares War," " Cockroach Army on the March," " Cockroaches Hurry Forward Reserves as D.D.T. Storms Defences." These headlines were indeed prophetic as the treatment by our skilled operators literally killed the cockroaches in hundreds. The results in backcourts, ashbin shelters and air raid shelters which had been treated were amazing and we were assisted in the outdoor treatment by good dry weather. Houses which were infested gradually ceased to be troubled after a week or two and at a resurvey some six months later the entire area was given the " all clear." Bug infestations noted during treatment were also dealt with and tribute should be paid to the D.D.T. Unit for their co-operation and good work.

Nuisances.—The number of nuisances and other matters dealt with was 13,645, a total which is not materially different from that of previous years. Details will be found in the Appendix Tables. Inspectors generally were able to overcome difficulties in executing repairs and only on ten occasions were statutory notices required. In eight of these repairs were carried out before court proceedings were instituted, in one the owners refused to do the repairs and the Sheriff granted an Order to the Corporation to carry out the necessary work, which cost £42 9s. 4d. In the other case the owner started the repairs and was given time to complete same and had to pay £2 2s. court expenses.

Drainage.—The continued development of housing schemes in the area was responsible for considerable testing of drains. Smoke tests were applied on 844 occasions and necessitated 4,862 visits.

Rent Restrictions Acts.—Applications for certificates showed a sharp upward trend from the previous year. Of the 152 applications received 56 were granted, 95 refused, and one withdrawn. The high proportion of refusals is explained by the fact that repairs were carried out by the owners prior to the applications being placed before the appropriate committee. Owners made applications for reports on 14 occasions and all were granted.

Rat Infestation.—The known number of rats killed was 7,271, an increase of 2,553 over the previous twelve months, and was due mainly to large-scale operations in one of the large destructor works. There were 67 complaints dealt with, involving 101 premises and necessitating 1,181 visits.

Cleansing of Common Closes, Stairs, etc.—Disputes among tenants regarding the regular rotation of close and stair cleaning are still numerous and entail a considerable amount of work. For neglecting their duty in this matter 479 tenants were warned and 1,357 rotation cards fixing the tenants' turns were served. In all, 4,517 visits were made to ensure that the regulations were complied with. In two cases it was necessary to institute court proceedings. Both were found guilty, one being find ten shillings and the other admonished.

Limewashing and Painting of Staircases, etc.—In 1,219 instances notices were issued to paint and limewash or to limewash and cleanse

close and staircase walls of dwelling-house properties. The number of properties limewashed and/or painted, including those done voluntarily, was 1,349 and 8,465 inspections were required.

Common Lodging Houses.—Apart from a few minor breaches of the bye-laws, which were duly attended to, there were no complaints. Visits by officers from the Department were welcomed and any suggestions for improvements generally well received.

Piggeries.—There are still two piggeries in the Division with accommodation for 391 pigs. They are well maintained and free from nuisance.

Brokers.—The premises licensed for this type of business in the Division are well conducted and present no difficulty in their supervision.

Bug Infestation.—In the course of the campaign against cockroaches the local press asked me for a message to householders in the Division generally. I took advantage of this offer to ask occupiers of houses who had bug or cockroach infestations and who were outwith the chosen area to contact our office and have their houses treated. The response was very gratifying and many houses with long-standing bug infestations were treated and are now free. During the year 772 visits were made.

Factories.—There were on the register at the end of the year 639 mechanical and 138 non-mechanical factories, 33 mechanical and 21 non-mechanical bakehouses. Inspections to the number of 1,532 were made and nuisances dealt with were similar to former years. These included lack of cleanliness of walls, floors and ceilings, dirty and choked conveniences and insufficient light and ventilation. No difficulty was experienced in having the necessary remedies carried out.

Places of Public Entertainment.—There are 11 cinemas with a total seating capacity of 17,691 and each is provided with suitable and sufficient sanitary accommodation. Contact with the respective managements brings out the fact that the comfort of their patrons stands high in the order of priority. No cause for complaint was found during our inspections. Billiard rooms, dance halls, public halls, and an ice rink in the area are inspected at regular intervals.

The officers are generally well received on their visits and in several instances advice has been sought on decoration improvement of heating and lighting, etc. Nuisance conditions, which seldom arise, are speedily remedied.

Shops.—The first post-war survey of shops has brought to light the fact that many had no water closet inside the premises. A large number use a convenience in common with householders and some had none at all. Changes in the mode of occupancy were numerous and in several instances the premises, which comprised front and back shop, had been separated to form a shop and a separate single apartment house, thus cutting off the shopkeeper's sink and water closet accommodation. The solution to the latter problem, of course, is the reversion at the first opportunity to the original position. The provision of suitable and sufficient sanitary arrangements is essential and although the shopkeeper feels he is hedged around with rules and regulations he invariably follows the advice given by the inspector.

Housing.—During the year 1,275 houses were added to the Division, comprising 2 seven-apartments, 112 five-apartments, 994 four-apartments and 167 three-apartments. Fourteen large houses in Pollokshields were " made down " to suit two families in each. Forty-seven families involving 227 persons were rehoused from dangerous buildings condemned by the Dean of Guild Court and 119 families with a total of 569 persons were rehoused for the first time in Corporation houses from the Orkney Street/Neptune Street 1937 Clearance Area. The families in 17 of the houses in the Plantation Area which were represented in 1948 were also rehoused for the first time. During the year 822 overcrowded families were rehoused, including 107 lodger families. On examination of the decrowded houses after reoccupancy, it was noted that the overcrowding was abated in 698 cases, reduced in 92, unchanged in 17, and increased in 15.

Inspection of District Regulations.—A comprehensive survey of all residential property in the Division was started late in the year. The particulars are recorded on a specially prepared housing survey form and much valuable information is readily obtainable at a glance. During the short period 1,584 houses were examined and as there are over 50,000 houses in the Division, it will be appreciated that the complete survey will of necessity be spread over a period of years.

Rehousing Schemes.—Systematic inspection of the houses in the various Corporation schemes was made throughout the year by the nurse-inspectors. Of 7,138 primary visits made, 6,157 houses were found to be clean, 937 in the fair category, and 44 dirty.

Verminous Children.—Examination of school children was continued as in former years and 98 visits were made to the schools in the Division. Altogether 10,299 children were submitted for examination and of that number 1,497 (14·5 per cent.) were found to be in some degree verminous, while 137 were dirty. Representations to the parents or guardians of these neglected children were effectual in securing the necessary cleansing. Visits were also made at the homes of the children and where necessary steps were taken to effect improvement.

Home-workers.—Regular inspections were made where work is carried on at home and conditions were very satisfactory.

Sanitary Conveniences.—The demolition of dangerous buildings and slum clearance operations reduced the number of water closets used in common. With reference to the water closets used in common it should be noted that sub-let rooms, which are in some cases entered in the Valuation Roll as separate houses, are not so regarded in the figures given below :—

Water closets used in common—		
Serving 2 tenants	980	
Serving 3 tenants	1,794	
Serving 4 tenants	997	
Serving 5+Tenants	265	
		4,036
Houses with baths		27,202
Dry closets and privy middens		18
Ashpits		316

W. B. EASTON,
Divisional Sanitary Inspector.

OFFENSIVE TRADES.

The number of offensive trades registered at the end of the year remains at 52, although not all are at present in operation. Several were transferred to other divisions as a result of alterations in the City Boundaries, and the majority of them, 41, are now located in the Eastern Division.

The nature of these businesses is shown in the following statement :—

	1949.
Bone Boilers	6
Tallow Melters	13
Manure Manufacturers	3
Gut Cleaners	3
Hide and Skin Factors	9
Soap Boilers	5
Tanners	9
Glue and Size Manufacturers	1
Horse Slaughterer	1
Knacker	1
Blood Boiler	1
	52

Disinfection.

The following table summarises the washings and disinfections carried out at Ruchill and Belvidere Disinfecting Stations during the year 1949 :—

	Belvidere.	Ruchill.	Total.
Number of washings	7,181	9,441	16,622
Average number per day	23·8	30·8	54·6
Articles washed and disinfected	289,364	318,088	607,452
Average number of articles per washing ...	40·3	33·7	36·5
Fuel consumed (tons)	530	502	1,032
Fuel used per article (lbs.)	4·12	3·56	3·80
Soap and powder used per article (ozs) ...	0·16	0·20	0·18
Disinfectant used per article (ozs.) ...	0·57	0·64	0·61

Number of Washings, Articles Disinfected, etc., for Years 1938-1949 *Inclusive.*

	Washings.	Articles.	Houses, etc., Disinfected.	White-washings.	Library and School Books Disinfected.
1938 ...	19,088	665,641	12,457	2	1,602
1939 ...	18,189	681,074	10,419	—	1,550
1940 ...	26,780	841,572	12,427	14	1,346
1941 ...	25,106	903,562	10,494	4	1,319
1942 ...	27,095	104,945	11,101	1	1,956
1943 ...	24,981	894,119	11,207	1	2,004
1944 ...	23,513	803,748	11,056	1	1,763
1945 ...	21,756	742,306	10,840	—	1,498
1946 ...	19,623	646,690	9,430	2	3,026
1947 ...	19,680	610,506	9,796	5	1,618
1948 ...	18,714	643,940	10,103	4	1,647
1949 ...	16,622	607,452	7,005	5	1,564

Disinfection of Second-hand Clothing, etc.—During 1949 there was a noticeable increase in the number of consignments disinfected by this Department, more than double the number dealt with in 1948. The bulk of this traffic is now with India and Africa as difficulties with the Irish authorities led to a pronounced falling off in the trade with Ireland.

At the end of the year a local export firm was negotiating with the Government of Eire for some modification of their requirements as to disinfection. The exports in this case are cloths, wiping rags, etc., which are washed, steeped in a solution of hypochlorite (strength of 14 to 15 per cent. available chlorine) and then passed through a hydro-extractor with a steam flow of 75 lb. pressure. This procedure is now considered satisfactory by the Irish authorities, subject to supervision of the process by this Department and issue of a confirmatory certificate by the Medical Officer of Health.

This same firm also exports second-hand clothing to Southern Rhodesia and in October, 1949, the Rhodesian authorities insisted that all such goods be dealt with by steam (under pressure) instead of spraying with formalin as had hitherto been the practice. Most of these garments are from Government stores and are dry-cleaned before delivery, while other are washed and laundered by commercial laundry companies.

Pending the installation by the firm of their own steam disinfector this Department undertook to have all such consignments to Rhodesia steam treated at one of the Disinfecting Stations (under pressure of 30 lbs. per square inch for a period of not less than 30 minutes).

The extent of this colonial trade is reflected in the increased number of consignments. The increase in amount of fees paid is due to

(*a*) An increase in the ordinary charge necessitated by rising costs;
(*b*) The special charge for steam disinfection;
(*c*) The fact that certificates are now required in quadruplicate.

Year	No. of Consignments.	Fees paid.
1939	375	£86 0 0
1940	310	77 1 4
1941	122	28 3 8
1942	19	5 5 7
1943	1	0 5 0
1944	—	—
1945	—	—
1946	210	51 11 3
1947	610	213 13 6
1948	351	148 7 10
1949	777	411 0 9

SECTION XIII.

OCCUPATIONAL HEALTH.

The work of the small Occupational Health Unit set up in the Department in the latter part of 1948 expanded during the year. Several investigations were conducted into the health of employees at work, both in Corporation Departments and in a few private offices and factories. An account is given of these investigations in a paper read to the B.M.A. Conference, Harrogate, on 29th June, 1949, and as this paper summarises the present position of the Occupational Health Service it has been thought fit to include it in this report.

The Occupational Health Unit also undertakes the medical examination of entrants to the Corporation's Superannuation Scheme and to the Manual Workers Sick Pay Scheme. At the beginning of the year only employees of the Housing, Cleansing, Parks and City Improvements Departments were examined, but by the end of the year the service had been extended to cover all Corporation departments with the exception of the Transport, Police, Fire and Lighting Departments. In addition, a small number of similar examinations were conducted on behalf of various other authorities. The totals are shown in the following table :—

Medical Examinations—1949.

Department.	Males.				Females.				Total.
	Entrance.	Sick Pay.	Superannuation.	Special.	Entrance.	Sick Pay.	Superannuation.	Special.	
Art Galleries and Museums	—	—	2	1	—	—	1	—	4
Blind Asylum	—	—	5	—	—	—	5	—	10
Baths	—	—	14	1	—	—	9	—	24
City Analyst	—	—	1	—	1	—	1	—	3
City Assessor	3	—	2	—	6	—	2	1	14
City Chamberlain	6	—	2	—	7	—	7	1	23
City Improvements ...	2	—	9	—	1	—	4	1	17
Civil Defence	—	—	4	—	—	—	—	—	4
Cleansing	—	128	216	2	1	—	3	—	350
Curator's	—	—	—	—	—	—	—	—	—
Education	12	—	47	—	22	13	72	1	167
Halls	—	—	3	—	—	—	5	—	8
Housing	3	36	135	—	2	—	11	—	187
Libraries	6	—	7	1	9	2	11	1	37
Markets	—	—	21	—	—	—	—	—	21
Office of Public Works	3	—	37	4	—	—	4	—	48
Highways	—	37	41	—	—	—	—	—	78
Sewerage Section ...	—	3	1	1	—	—	—	—	5
Parks	—	31	60	—	—	1	1	—	93
Public Health	—	—	13	—	—	—	—	—	13
Printing	—	—	2	—	2	—	1	1	6
Registrars	—	—	—	1	—	—	1	—	2
Town Clerk	4	—	3	—	2	—	3	—	12
Water	5	8	35	3	2	—	2	—	55
Weights and Measures ...	—	—	2	—	—	—	—	—	2
Welfare	—	—	1	—	—	—	12	—	13
Veterinary Inspector ...	—	—	—	—	—	—	2	—	2
External Authorities ...	1	—	—	8	—	—	1	1	11
	45	243	663	22	55	16	158	7	1,209

Total Number of X-ray Examinations.

	Males.	Females.
Ruchill (Chest, etc.)	679	195
Stobhill (Barium Meal) ...	11	1
	690	196

Out of the total 1,209 candidates examined during the year 1949, 68 were rejected as medically unfit for entry to the particular scheme. Except where urgent medical treatment was indicated these persons were not certified as unfit for employment. In a few instances recommendations were made to the head of the department concerned to the effect that employment in a suggested alternative job was indicated in the light of the findings of the medical examination. The number of candidates rejected represents 5·62 per cent. of the total examined. The totals turned down are shown below under the heading of disease, namely :—

	Males.	Females.
Pulmonary Tuberculosis	15	5
Tuberculosis of Spine	1	—
Bazin's Disease	—	1
Obesity	—	1
Peptic Ulcer	7	1
Heart Disease	1	2
Hyperpiesis	2	—
Hernia	5	—
Varicose Veins and Ulcers	9	—
Ear Conditions	11	—
Chronic Bronchitis	2	—
Nephritis	1	1
Disease of the Nervous System ...	1	—
Angina of Effort	—	1
Klippel-Feil Syndrome	—	1
	55	13

Not all of these individuals were considered to be unfit for their present or proposed employment. Some were temporarily turned down for admission to the Superannuation Scheme and arrangements made in conjunction with their own private practitioners for the necessary treatment. Once treatment is completed they will be admitted to the Scheme.

In the light of experience gained in these examinations it is felt that a high standard of medical examination designed to protect the Sickness Fund (incorporated in the superannuation examination) prevents a number of disabled but otherwise suitable candidates from obtaining that degree of sheltered employment obtainable only in certain local authority departments. Because of this rigidity some very desirable applicants were lost to the Corporation service. A memorandum on this subject is in the course of preparation in which it is suggested that some modification in the Sickness Scheme might be possible whereby a higher proportion of disabled persons can be employed without reduction in the efficiency of the departments concerned.

At the present moment an investigation is being made into the incidence of occupational dermatitis in one of the Corporation's own factories.

OCCUPATIONAL HEALTH—ITS ORGANISATION WITHIN THE FRAMEWORK OF THE LOCAL HEALTH AUTHORITY

Historical Introduction.—The mechanical inventions and discoveries which accompanied and profoundly affected the industrial revolution had a considerable effect on the distribution of population within the United Kingdom. It emptied the villages and crowded the towns. As mechanisation developed to aid the craftsmen in many industries, the construction of more and larger buildings became necessary to house the machines and to cope with increased output. In this way, factories developed and multiplied, and workers from the country-side were attracted to the new industrial townships which grew up around them. This concentration of labour around the factories and mills gave rise to new problems of novel complexity. For instance, there was a public outcry against the long hours and conditions of work of the children ruthlessly exploited in the mills in the early part of the nineteenth century, followed by a campaign against the death-roll from major accidents in factories. By the end of the nineteenth century attention was directed to the toxic hazards in industry. That this subject was a matter of great concern to the Government of that time is shown by the fact that Thomas Morrison Legge was appointed to be the first Medical Inspector of Factories in 1898. Legge was a pioneer who carved out a place for industrial medicine in this country by his brilliant researches into occupational lead poisoning and industrial anthrax. Today the health of the worker is a matter of paramount importance and primary public interest.

The Growing Influence of Preventive Medicine.—The manpower problems of two major wars within a quarter of a century have emphasised the need for efficiency in industry. Improvement in the efficiency of the machinery has been achieved by the engineers, while attempts are now being made to improve that of the labour force. Towards this end Institutes of Management have been set up to train recruits for managerial posts in industry, and new methods of instruction have been introduced into apprenticeship courses.

During the growth of interest in occupational health, various aspects have from time to time been stressed. For example, interest first centred on preventing the spread of infectious diseases, then on the avoidance of ill-health in children; later the health of women working in factories came under review; and in recent times attention has been focused on toxic hazards, industrial injuries and environmental conditions in factories. What was at first known as industrial medicine gradually became known as industrial hygiene, and more recently the new terminology occupational health was adopted. The alteration in nomenclature demonstrates the changing attitude from interest in disease to interest in the prevention of disease. Occupational health today may be defined as that branch of preventive medicine which is concerned with the wellbeing of the citizen during the period of remunerative employment; it is primarily preventive in character and is no longer limited to employees in factories, mills and mines but covers the whole population wherever employed.

Occupational health is a specialised branch of preventive medicine, and has as its main principles the promotion of healthy living and the minimisation of incapacity. The basic relationship between public health and occupational health is shown by the fact that many of the pioneers in this new field of medicine naturally graduate to the industrial side by way of public health, and that our universities train students studying for the Diploma in Industrial Health (D.I.H.) side by side with those studying for the Diploma in Public Health (D.P.H.). It seems reasonable, therefore, to advocate that the practice of occupational health should be administered by a public body well established in the field of preventive medicine, namely, the Local Health Authority.

Environmental Services of the Local Health Authority.—The environmental services have for long been the province of the Local Health Authority, a fact which the recent National Health Service Act recognised when allocating duties to Local Authorities. The Act assigned to large burghs and county councils the responsibility for all services which could be included in this category. The Local Health Authority was specifically empowered to deal with such matters as care and after-care, the provision of home helps, the domiciliary midwifery service, home nursing, care of mental defectives and health education. These duties, it should be remembered, were additional to its original functions relating to the control of environmental hygiene and sanitation. The Act also stressed its duties in the maternity

and Child Welfare Services in the same way as the Education Act of 1946 emphasised the importance of the Education Health Service,

The National Assistance Act, 1948, placed the duty of caring for the aged and infirm on the Local Authority, so that today the Local Authority services may be said to cover the needs of the citizen from birth to school leaving age, and again in later life after the period of useful employment has ceased. The intervening period is the span of the normal man's working life, but while the Local Authority is interested in his home environment, his food in the widest sense and, in some measure, in his recreation, it has hitherto possessed very limited powers to assist in the betterment of his conditions of work.

It is fundamentally unsound that this period of busy working years which forms the major portion of the life-span, with its strain and uncertainty, should be so poorly provided for. Apart from the decline in efficiency of the worker which results from this neglect, the nation has to deal with a vast amount of chronic avoidable illness in later life. This, of course, throws an additional burden on its over-worked hospital system besides causing serious economic loss. The happiness and health of the citizen, which every political party is so anxious to safeguard, can best be ensured by providing services and assistance to prevent illness and avoid breakdown rather than by supplying palliatives to the permanently disabled.

Legal Powers of the Local Authority with regard to Factories.—Under the Factory Acts, 1937 and 1938, the Local Authority is responsible for the following duties :—

Health Provisions—

(1) Maintenance of a register of all factories in the area.

(2) Supervision of sanitary conveniences in all factories.

(3) In non-mechanical factories, the supervision of temperature, cleanliness, overcrowding, ventilation and drainage of floors.

(4) In mechanical factories, the supervision of sanitary conveniencies only.

(*Note.*—Except as regards sanitary conveniences, the Local Authority does not have the duty of enforcement of the above provisions in the case of railway property, docks and inland waterways.)

The Local Authority is required to issue a certificate to the effect that a satisfactory means of escape is provided in the event of fire. It is also normally responsible for the purity of the water supply to the factory.

Special powers are vested in the Local Authority with respect to basement bakehouses and the supervision of places where outworkers are employed.

While the Factories Act does not deal with the structural safety of factories, power is given to factory inspectors to apply to a Court of summary Jurisdiction for an order on the grounds that the factory is in a dangerous condition. These, however, are general emergency powers. If a factory is in a dangerous condition, action is more commonly taken by the Local Authority under powers given by Section 58 of the Public Health Act, 1936 (England and Wales) and by Sections 191 to 200 of the Burgh Police (Scotland) Act, 1892.

In the case of factories owned by the Crown, the factory inspectorate undertakes all the duties delegated to the Local Authority under the Factories Act. The Factories Act applies equally to Scotland and England, the only deviation being in the case of appeals where the terminology applied to the Courts of Appeal is different.

Possible Methods of Administration of a National Occupational Health Service.—At present there are three central Government departments directly concerned with one or more aspects of industrial health supervision and administration :—

(1) *The Ministry of Labour and National Service*, which already has control of the employment of the labour force, is concerned with retraining, rehabilitation and the resettlement of disabled persons, and is charged with the general enforcement of the provisions of the Factories Act through its Factory Department.

(2) *The Ministry of National Insurance*, which is concerned with responsibility for unemployment benefit and therefore vitally concerned with sickness prevention and with the minimisation of incapacity for work with its resultant sickness, absence and benefit payments ; and

(3) *The Central Health Department*—the Ministry of Health in England and the Department of Health in Scotland—which is charged with responsibility for the general health of the community and with the administration of the new health service, including the hospital administration, which at so many points must necessarily be concerned with the employed person and his or her fitness for employment.

Cogent reasons could be advanced to justify the claims of any one of these three central authorities to exercise general supervision of industrial health services, and it is understood that this question of central responsibility is at present receiving the anxious consideration of the Government departments concerned.

In the spring of 1949 the Government set up a Committee " to secure that the country's medical resources are used to the best advantage " in the field of industrial health, and future developments must clearly await the Committee's report.

The outcome of these deliberations will be reflected in the local machinery employed in the future industrial health service. The Ministry of Labour and the Ministry of National Insurance already have district offices in all the principal towns dealing with the particular facets of industrial health activity for which they are responsible. On the other hand, the general health services of the country for the supervision of which the central health departments are concerned in a general way, lie in the hands of the major health authorities, of which there are some 145 in England and 55 in Scotland. The public health Departments of these major health authorities are recognised locally as the centres of preventive medicine.

The Position in Glasgow.—With a view to obtaining first-hand experience in this matter, two pilot investigations into occupational health have been carried out in Glasgow in recent months by two medical officers attached to the Glasgow Public Health Department. These men are specially trained for the work, and possessed the Diploma in Industrial Health as well as the Diploma in Public Health. The basis of each survey was a complete analysis of the working environment and an estimation of the physical and mental capacity of each employee in relation to his or her job. The purpose of the investigations was to ascertain (*a*) particulars of the services required by the employees

by the industry, (*b*) the repercussions of these services upon the health of the individual workers, and (*c*) an estimate of the time which a medical officer would require to devote to the supervision of the health and welfare of the employees.

The opportunity to undertake these investigations arose out of queries raised by employers with regard to the health of their operatives. In one instance, the subject of study was an old established weaving mill in the East-End of Glasgow employing 500 operatives and in the other the Corporation Cleansing Department employing 2,400 persons.

The Weaving Mill.—In the case of the weaving mill, investigations made on the atmosphere in the workrooms revealed major defects in the air movement and the supply of fresh air. Concentrations of carbon dioxide as high as 28 parts per 10,000 were detected and traced to the practice of recirculation of air in the interests of fuel economy. Lighting defects were also found, cloth examiners, for instance, having illumination of less than 2 ft. candle-power at bench level. Recommendations made to and adopted by the management on these and other subjects, such as dust removal, seating arrangements and lavatory facilities, have resulted in a marked improvement in the working environment in the mill, with a reduction in the minor accident rate.

At the same time, a medical consultative service was made available to the workers, and in co-operation with the patient's doctor many defects found were able to be corrected. The co-operation of the general practitioners in the area was of the highest order, and the Public Health medical officer prescribed no treatment without reference to the patient's own doctor. In cases where hospitalisation or a specialist opinion was deemed necessary, the letter to the doctor contained an offer of help in securing the required service. In almost every instance the practitioner left the arrangements to the Public Health medical officer.

Help was also given to the employees in social and domestic problems, and in this respect use was made of the appropriate Local Authority service. An outstanding discovery of the survey was the very real necessity for health education that was found. The employees, at first somewhat apathetic, soon began to take an interest in the improved facilities provided, and there is no doubt as to the success of the experiment.

Cleansing Department.—This Department, which is administered by Glasgow Corporation, employs 2,400 men who are distributed throughout the city in units of 200 or less. There are several divisional headquarters, each with a refuse disposal works and local depots from which the teams of refuse collectors operate.

The Medical Officer who undertook the review consulted records already in existence, material obtained from the medical examination of applicants for superannuation and sick pay schemes, and carried out a thorough survey of the processes and practices of the Department.

In this type of work, dust control and efficient mechanisation in the handling of refuse were found to be the prime factors in reducing the sickness, absence and accident rates. Marked differences in these rates were found at the various depots, mainly due to the type of plant in use. The nature of the work and the outside conditions predispose to rheumatism, locomotor defects, cardiovascular degeneration, respiratory catarrh, dermatitis, trauma and sepsis. Medical examination of sections of these employees revealed such conditions as hernia, varicose veins, chronic bronchitis and peptic ulceration, with all of which heavy labour is incompatible.

Points of interest extracted from the report were :—

(1) Almost half the accidents involved injury to the upper extremity, while over one-third involved the fingers and hands. All the workers are issued with gloves for protection, but all do not wear them. The same criticism was made with regard to the wearing of eye goggles and dust masks. Many of the workers dispense with these, as they state that they curtail the field of vision and are uncomfortable to wear. It seems to me that further thought might well be given to both the design of gloves and the form which the protection for the eyes and upper respiratory passages should take.

(2) It was found that even qualified first-aid workers had little real understanding of asepsis, and that it was the introduction of sepsis into wounds of even the most trivial nature that caused the large majority of serious complications.

(3) Dermatitis, which is voluntarily notifiable, was a much less common occurrence than one would expect from the amount of handling of material and the dusty nature of the occupation.

(4) The medical officer engaged in this investigation undertook a job analysis of the task which each man was called upon to perform both on day shift and night shift, a method which makes it possible to fit each man into a particular job within his physical capacity.

(5) Owing to the nature of the work the development of chiropody facilities was urgently required.

(6) Health education in personal hygiene and in industrial hygiene would reduce the incidence of accidents and ill-health, but employees must recognise that, unless they are prepared to utilise the facilities provided for their comfort and safeguard their own interests in these matters, local authorities will naturally be unwilling to spend money in these directions.

(7) Improved first-aid facilities were found to be required, and the Director of Cleansing immediately implemented a proposal that at least two men trained in first-aid should be alloted to every works and depot.

(8) Cleansing Department Employees ought to have double lockers, one for clean clothes and one for working clothes, and in addition, spray baths should be provided so that at the end of the day's work they can return home clean. The Corporation of Glasgow is at present making improvements in this respect and is constructing a new plant at Polmadie capable of dealing with 600 tons of city refuse per day.

There is no doubt that these surveys have been successful in stimulating both employers and employees. They show that an efficient group industrial health service can be provided for the smaller units in industry by the major health authorities at little extra cost to the nation without setting up elaborate new and expensive services. The method suggested is that after a preliminary investigation by the Public Health medical officer supervision of the personnel should then be carried out on a part-time basis by a general practitioner. Our experience has shown that in this work liaison between the Public Health Department and the general practitioner service could be readily made.

The Extent of the Problem.—In the Supplement of the British Medical Journal of 28th May, 1949, Dr. J. A. L. Vaughan Jones, Chairman of the Occupational Health Committee, presented a report embodying the views of the Association on the question of a comprehensive Occupational Health Service. Time does not permit of more than a reference to a few of the more salient sections of a very excellent summary :—

Section 3 states—" The Factories Acts of 1937 and 1948 lay down minimum rather than optimum standards. There are many working communities which are not within their scope, and there are only 350 inspectors available for visiting 280,000 workplaces covered by the Acts. Moreover owing to the nature of its relationship with industry, the Factory Department, through its visiting inspectors and Appointed Factory Doctors, can make only a very limited contribution to the solution of the psychological problems of individual and group character which recent experience has shown to be important in the industrial world."

In Glasgow we have 54 factories employing over 500 persons, 97 factories employing 200-500 persons, and no less than 5,895 factories employing under 200 persons.

(4,357 mechanical and 1,538 non-mechanical).

The extent of the problem with which we are faced becomes apparent when these figures are considered. The cost in medical personnel and in national expenditure which a full-time service would entail would become enormous.

Section 7 *states*—" An occupational health service is primarily preventive in character," and *Section* 11 advocates the Ministry of Health as the appropriate central authority.

Section 14 *states*—" The public health service administered by the local health authorities is likely to have increasing responsibilities in relation to occupational health . . . These authorities already have responsibility for the health of the school child, and it is generally accepted that a closer link between the school medical service and the health services for juvenile workers is desirable. Further, the public health service, by training and experience, has the preventive approach to health problems which is essential in the sphere of occupational health. Again the responsibilities of the local authorities in connection with the location of industry and the provision of residential accommodation and transport services are intimately concerned with the health of industrial workers."

Section 16 advocates pilot surveys such as have I reported from Glasgow.

Advantages of Local Health Authority Service.—I consider the following points include the main arguments in favour of an Occupational Health Service based on the major Local Health Authority :—

(1) The major Local Health Authority is the recognised centre of preventive medicine for the area. It has prestige gained from long establishment, forms an integral part of the life of the community, and relies for its success on its accessibility.

(2) It is a distinct advantage that the industrial medical officer should be a member of the staff of the Public Health Department, because he is less likely to be regarded with suspicion both by the employees and the management.

(3) He is an impartial investigator who has access to all departments of the Local Authority, and through the close liaison which exists between the Public Health Department and the hospitals and out-patient clinics he is enabled to make use of these services without delay.

(4) A new route is open to the general practitioner for the solving of his patients' medical and social problems via this service of his Local Health Authority. Already the general practitioner relies on the Local Authority for the provision of such services as rehousing of overcrowded and tuberculosis cases, domestic help, domiciliary midwifery and home nursing, as well as for assistance with the aged and infirm, the mentally deficient, and lunacy certification—in fact, for practically every service which is not clearly a hospital problem.

(5) Another advantage would be that an arrangement of this sort would ensure that the knowledge about young entrants to industry gathered by the Education Health Service would almost certainly be more fully brought to bear upon the early years of working life.

(6) The Medical Officer of Health in his capacity as medical adviser to his Local Authority has a definite duty to advise the Directors of the Municipal undertakings with regard to the health and welfare facilities of their employees. He at present carries out the sick-pay and superannuation examinations, and the addition of one or two medical officers with industrial experience would permit him to form the nucleus of the new service. A start should first be made in the large cities and industrial counties, of which there are some 12 in Scotland and in which over 90 per cent. of all factories are situated. The Local Authority can use this service to raise the standard not only of the health of the citizens but to forge a link with its health-visiting, educational and general social service provisions.

(7) Such a scheme would permit the Local Health Authority to carry out research into many problems affecting the health of the worker, a duty vested in it by Section 29 of the National Health (Scotland) Act.

(8) In planning an Occupational Health Scheme on a national basis, heed must be taken of the number of doctors available to take part in the scheme. There are at present, and will be for a long time, too few industrially trained medical officers to provide a full-time service for all the industrial establishments in the country, even if the suggestion that several small factories combine to employ a full-time medical officer between them be adopted. Therefore, on the basis of economy alone, advantage should be taken of the services of the Local Health Authorities who have already in existence all the basic machinery required for such a service. Little additional expenditure would be needed. Local problems can best be solved by local people, who have knowledge gained by long experience on the spot and continuity of endeavour.

Such extension of the Local Authorities' services to the people would be as natural as it is necessary, and would rapidly prove its worth to the individual, the community and the state.

SECTION XIV.

WELFARE SERVICES.

In March, 1949, the Corporation agreed that the Public Health and Welfare Services Departments be amalgamated and in June, 1949, the Corporation decided that the Department be renamed the Health and Welfare Department.

The Welfare Section of the Department is responsible for carrying out the duties imposed on the Corporation by the National Assistance Act, 1948, and these duties include the following :—

(1) Provision of Accommodation—

(*a*) Residential accommodation for persons who by reason of age, infirmity or any other circumstances are in need of care and attention which is otherwise not available to them (Section 21).

(*b*) Temporary accommodation for persons who are in urgent need thereof, being need arising in circumstances which could not reasonably have been foreseen or in such other circumstances as the Authority may in any particular case determine (Section 21).

(*c*) While it is the duty of the Assistance Board to make provision whereby persons without a settled way of living may be influenced to lead a more settled life and for the Board to provide and maintain centres to be known as reception centres for the provision of temporary board and lodging for such persons, the Board may require Local Authorities to provide and maintain such centres and persons coming under this provision of the National Assistance Act are accommodated on behalf of the Board by this Department in Foresthall (Section 17).

(2) Provision of welfare services for blind, deaf, dumb and crippled persons, etc. (Section 29).

(3) The making of contributions to the funds of voluntary organisations providing recreation or meals for old people (Section 31).

(4) The registration and inspection of disabled persons' or old persons' homes (Sections 37-39).

(5) The registration of charities for disabled persons (Section 41).

(6) Arrangements for compulsory removal of persons in need of care and attention and certified by the Medical Officer of Health as suffering from grave chronic disease, etc., living in insanitary conditions and unable to devote to themselves or are not receiving from other persons appropriate care and attention (Section 47).

(7) The temporary protection of property of persons admitted to hospital, etc. (Section 48).

(8) Arrangements for the burial or cremation of the body of any person dying within the city where it appears that no suitable arrangements for disposal of the body have been made by any other party (Section 50).

Residential Accommodation.—Accommodation is provided in three Homes—Foresthall, Crookston and Woodburn—as well as in a number of Homes run by voluntary organisations.

Foresthall has licensed accommodation for 1,533 beds, of which 642 are used by the Western Regional Hospital Board, the balance of accommodation being available for the aged and infirm and for the provision of temporary accommodation of persons in urgent need resulting from fire, flood, demolition of property, etc. Persons without a settled way of living are also accommodated in Foresthall. At 31st December, 1949, there were 636 patients in the hospital section, 464 aged or infirm in regular residence, and 39 in temporary accommodation, making a total of 1,139 residents. The staff numbered at that date 352.

The original building at Foresthall was erected in 1850. In 1935 the Corporation decided that steps should be taken to discontinue its use as early as possible and that only necessary expenditure on

repairs should be incurred. As a result of this policy and the conditions prevailing during the war years, improvements which might otherwise have taken place were suspended but on account of the demand for accommodation it became apparent that the institution would still be required for a considerable number of years and redecoration and modernisation first of the Hospital Section was undertaken in order to provide as many beds as possible for chronic sick persons with a view to releasing beds in general hospital for more acute cases. Work has now been commenced with the redecoration and improvement of the amenities in the residential section and improvements continue to be made.

Crookston Home and Cottages were opened by the Corporation after extensive modernisation and renovation in October, 1934, and provide dormitory accommodation for 342 old people. The first terraces of cottages were built and opened in September, 1938. The war necessitated the postponement of the completion of the original scheme but 104 cottages were completed, 72 for single persons and 32 for couples. Experience has shown that the demand for residential accommodation for married couples is small compared with the great demand for such accommodation from single persons. On 31st December, 1949, the population of Crookston Home and Cottages was 441. Persons on admission to Crookston are ordinarily able to go about, dress and attend to themselves and the greatest freedom to go out and visit friends and to receive visitors is allowed. When residents become bedridden they are accommodated in the wards of the Main Home. With the passage of time it has been found that now about one-third of the residents in the dormitories are bedridden or partly bedridden. While the Corporation provide concerts and other entertainments, the bowling club and the social life of the community at Crookston are run by a committee of residents elected by themselves. Bowling matches are arranged with outside clubs and a branch of the Women's Guild of the Church of Scotland was formed by a number of the women resident in the Home.

During the year the adaptation of a small separate building which was originally a maids' home was commenced and has now been completed, 14 old people being accommodated in single rooms each fitted with a washhand basin. Special dining and sitting room accommodation is provided in this separate annexe.

Woodburn is a hostel accommodating 28 old people—6 single rooms, 5 double rooms and 4 rooms accommodating 3 each. Each

bedroom is fitted with a washhand basin, and a single bed, wardrobe and dressing table are provided for each resident. The average age of the residents is 76 years.

The following table shows the numbers in residence in Foresthall, Crookston, and Woodburn at the end of each month during 1949 :—

	Foresthall.			Crookston.			
Month.	Hospital.	Residential and Temporary Accommodation.	Total	Home.	Cottages.	Total.	Woodburn.
31/1/49	605	528	1,133	311	110	421	28
28/2/49	616	521	1,137	304	109	413	28
31/3/49	610	536	1,146	303	110	413	28
30/4/49	593	507	1,100	301	112	413	26
31/5/49	591	526	1,117	310	113	423	26
30/6/49	595	516	1,111	314	113	427	27
31/7/49	596	527	1,123	323	115	438	28
31/8/49	597	529	1,126	324	111	435	28
30/9/49	592	523	1,115	314	113	427	27
31/10/49	626	496	1,122	322	110	432	28
30/11/49	629	514	1,143	320	112	432	28
31/12/49	636	503	1,139	328	114	442	27
Lowest	591	496	1,100	310	109	413	26
Highest	636	536	1,146	328	115	442	28

During the year on the authority of the Corporation a sound film was made recording the services and accommodation provided in these homes and this film, under the title 'Glasgow Takes Care of Its Old Folk' was exhibited for the first time in the Kelvin Hall during the 'Glasgow To-day and Tomorrow' Exhibition at the end of March.

The present position of the care and welfare of the aged and chronic sick has been summarised in a paper given by the Medical Officer of Health to the Congress of the Royal Sanitary Institute at Eastbourne in April, 1950. The paper is reproduced in full at the end of this section.

Temporary Accommodation.—The provision of temporary accommodation for those in need through circumstances which could not reasonably have been foreseen was not overtaxed during 1949. A party of 20—9 men, 8 women and 3 children—were admitted in the early morning on 28th October after the collapse of the property in which they were living. This was the largest party accommodated as the result of one incident. There were also accommodated those known as 'homeless families' who are really a housing problem but are cared for by this Department. Those accommodated are women with children who have been evicted from their homes or lodgings and have been unable to find alternative accommodation. At the end of the year there were 9 such families, comprising 9 mothers and 30 children. The largest number of children in any one family was 7 and their ages ranged from 15 years to 4 months. The highest number of such families accommodated at any one time during the year was in September when there were 13 women and 37 children. Of the 9 mothers in residence at the end of the year, 1 was a widow, 1 a deserted wife, 3 were married and separated, and 4 had husbands who were in employment and contributed towards the maintenance of their families. Seven of them had been put out of lodgings and 2 had been evicted from their own homes for non-payment of rent. Three of the families had been in residence at Foresthall for over one year and it has been a matter of considerable concern that women and children should be housed in a mixed institution of this size for more than a short transitional period.

Persons without a Settled Way of Living.—Persons without a settled way of living who are accommodated on behalf of the Assistance Board averaged about 10 per night.

Welfare Services for Handicapped Persons.—The Blind Persons Act, 1920, was repealed by the National Assistance Act, 1948, and arrangements for promoting the welfare of blind persons are now made under that Act which, however, extends the arrangements to include not only blind but also the deaf, dumb, cripples and "other persons who are substantially or permanently handicapped by illness, injury or such other disability as may be prescribed under the Act." The welfare services for the handicapped are being built up gradually. An agreement has been entered into between the Corporation and the Mission to the Outdoor Blind under which the Mission acts as agents for the Corporation in providing many of the services for the blind.

Similar arrangements are under negotiation with voluntary organisations dealing with the deaf and dumb. The Department has also set up a section for the after-care of handicapped young people over school age. Accommodation was provided in the Department's premises for a blind male voice choir and a special physical training class was arranged by the Education Department for blind men.

Contributions to Old People's Organisations.—Under Section 31 of the National Assistance Act which permits contributions to be made to organisations providing meals or recreation for old people a number of grants were made to old persons' clubs, principally for the provision of cups, tea urns, kettles and games. Equipment was also supplied to the Women's Voluntary Service to enable them to extend their 'Meals on Wheels' service, the food delivered by the W.V.S. being supplied by the Department's catering service.

Registration and Inspection of Old Persons' Homes.—Part IV of the National Assistance Act provided that the registration and inspection of Homes for Disabled and Old Persons should come into operation on 1st November, 1949, and arrangements were made for dealing with applications for the registration and inspection of the Homes by duly authorised officers of the Department.

Registration of Charities.—In terms of Section 41 of the National Assistance Act the War Charities Act of 1940 was extended to include charities whose principal objects were the promotion of the welfare of disabled persons. During the year 3 such charities were registered.

Compulsory Removal of Persons in Need of Care and Attention.—Section 47 of the National Assistance Act introduced for the first time in Scottish Legislation the power, on the certificate of the Medical Officer of Health and with the authority of the Court, to remove to hospital or suitable accommodation any persons suffering from grave chronic disease or being aged, infirm, etc., and not receiving suitable care and attention. This power has not often been used and is only exercised when it is found impossible to persuade the person to act in their own best interests. During the year 3 applications were made to the Court and all were granted and the persons admitted to appropriate accommodation.

Temporary Protection of Property of Persons admitted to Hospital, etc.—Where no other suitable arrangements are made for the protection of the property of a person admitted to hospital or other institution it is the duty of the Local Authority to protect the property. This duty extends only to movable property which, when necessary, is removed by the Department to safe storage and returned to the owner on discharge from hospital or to his legal representative in the case of death. The movable property includes not only personal belongings, e.g., jewellery and personal documents, but in addition the individual's furniture for which storage provision requires to be made.

Burial or Cremation.—Arrangements are made by the Welfare Section for the burial of any person who has died or has been found dead in the city where no suitable arrangements were being made otherwise. Cremation is only arranged where it is known that the deceased person so desired. These burials are always undertaken with fullest respect and consideration and efforts are always made to contact anyone who might be interested in the interment of a particular deceased ; for example, in the case of an old war veteran, while the Department made the normal funeral arrangements, his regimental association was advised and was represented at the interment.

Investigations.—Investigations are undertaken by the Welfare Section on behalf of other sections of the Department, e.g., Child Welfare and Domestic Helps, and on behalf of the Education Department in connection with the supply of food, clothing, etc., and the City Chamberlain's Department (Collector's Section) in connection with applications for the relief of rates. Investigations are also undertaken on behalf of the Clydeside Air Raid Distress Committee.

Distribution of Gift Food.—Gifts of food received from the Commonwealth are distributed by the Department which also co-operates with the Lord Provost in the distribution of gifts received at the Christmas Tree in George Square. About 5,000 gift parcels of food were distributed during the year.

Catering.—The catering in the restaurant at Kelvin Hall is undertaken by the Department, the number of meals served during 1949 being as follows :—

Main meals	364,756
Light meals	911,668
	1,276,424

The Civic Restaurant which had been opened in St. Vincent Street as a war-time measure was closed down on 31st December, 1949, its original purpose having been outlived.

The Crookston Cooking Depot now supplies meals for the School Meals Service, for the ' Meals on Wheels ' Service, for certain canteens of the Housing Department, and for pupils of the Stow College.

Clothing Store.—The Clothing Store, in addition to supplying the needs of mental defectives maintained by the Department also operates an arrangement with the Assistance Board for the supply of clothing under the Board's special needs provisions. The Clothing Store is also responsible for supplying and issuing clothing on behalf of the Children's Department to all boarded-out children and for the dressing of these children prior to travelling to the homes of guardians.

Mental Defectives and Mental Patients.—Under the National Health Service (Scotland) Act, 1947, Local Authorites were relieved of the responsibility for the provision of institutional accommodation for certified mental patients and mental defectives, those becoming the responsibility of the Secretary of State. When certified mental patients are boarded-out under guardianship this is deemed to be an extension of the hospital service but arrangements have been made under which the placing and supervision of those boarded-out mental patients continues to be undertaken by the Department's officers, the cost being repaid by the Regional Hospital Boards.

In the case of mental defectives, these remain under the care of the Local Authority, i.e., defectives between the ages of 5 and 16 years, unless certified as ineducable, remain the responsibility of the Education Department, while those over 16 years or reported as ineducable are the responsibility of the Health and Welfare Department. The number of mental patients and mental defectives on the boarded-out rolls increased from 1,304 at 31st December, 1948, to 1,337 at 31st December, 1949. There are unfortunately many ineducable mental defectives on the waiting lists for accommodation in certified institutions but the lack of such accommodation is still grave and many urgent cases cannot be accommodated.

THE CARE AND WELFARE OF THE AGED AND CHRONIC SICK.

I—Introduction.

Early writings frequently mention the aged but seldom refer to the chronic sick. Historians of other days found more inspiring material for their quills in describing the wars and famines, politics and pestilences of their times ; there was dramatic value in these. In any case even our grandfathers did not foresee the growing problem with which this generation was to be faced in attempting to deal with an ever-increasing proportion of aged persons.

Neither Elizabethan nor nineteenth century Poor Law was designed to deal with the problem as we find it. The old ideas of " setting to work all persons having no means to maintain them " or of " offering the workhouse " contain no acceptable solutions for our modern problem. The wonder is that the old makeshifts died so hard that the country had to withstand the shock of two world wars before Parliament saw fit to pass legislation in keeping with the spirit and progress of the twentieth century.

It is intended in this paper to study the care and welfare of the aged in Glasgow, and with this end in view, for those with a historical turn of mind, a short summary of the development of Poor Law legislation in Scotland may be of interest.

II.—The Scottish Historical Background.

The Statute of Perth, 1424, which prohibited begging between the ages of fourteen and seventy, is regarded as the first attempt by the authorities to deal with the problem in Scotland. In those days folk at both ends of life were apparently expected to beg for a living, or were at least not subject to the rigours of the law for so doing. A later Act of 1503 stated that none was to be tholed to beg in burghs " except cruiked folk, blind folk, impotent folk and weak folk." A further advance in Poor Law administration was made in 1579 with the introduction of the Charter of the Scottish Poor Law, which was the principal Act until 1845. This Charter advocated punishment of strong

and idle beggars and relief of the poor and impotent. A roll of the aged and impotent was to be kept in each parish and hospitals erected for their care. Any aged and impotent poor who refused to work without being so diseased that they were totally unable to do so were to be treated firmly, the refuser first to be scourged and put in the stocks, and for a second fault to be punished as a vagabond. The enforcement of this law was by no means easy, and as an offset to the general trend of hard and unimaginative official measures there grew up in Scotland in the sixteenth and seventeenth centuries such hospitals as St. Nicholas in Glasgow and Trinity Hospital in Edinburgh.

In the seventeenth and eighteenth centuries provision for the aged poor proved difficult alike in town and country, and in the towns particularly the problem was a formidable one. In Glasgow, during the eighteenth century, there were three main sources from which relief for the poor was drawn :

(1) From the fourteen trade incorporations which looked after their decayed brethern and their widows ;

(2) from the Kirk Session ; and

(3) from the Town's Hospital erected by public subscription and opened in 1733, which, in some of its features, anticipated the modern workhouse, though it was described as " more like a palace than a habitation for necessitous old people and children." Living conditions in the hospital were spartan. The diet was simple in the extreme, and there were many regulations, harsh and irksome. The aversion of the Scottish poor to such institutions was strong.

Of this time, Fletcher of Saltoun wrote, that by 1700, out of a population of a million and a half, two hundred thousand resorted to begging. Owing to increasing difficulties in affording relief to the poor, the Government was driven, in 1845, to appoint a Commission of Enquiry, which resulted in the passing of the Poor Law (Amendment) Act. This piece of legislation created a Central Board of Supervision in Edinburgh, with parochial boards in each parish, whose duties were to make up rolls of the poor, to appoint an inspector of poor and to determine methods of raising funds for their relief. In 1850 the Board of Supervision published model rules and regulations for the management of poorhouses. Prior to these regulations, poorhouses had been regarded almost exclusively as almshouses, which afforded a comfortable retreat

for the more respectable of the aged and infirm poor, and were conducted in a manner corresponding with the purposes then contemplated. It was a matter of favour to be admitted into the house and severe punishment to be expelled from it. Local authorities were now required to furnish a test of poverty in addition to ministering to the needs of the aged and infirm. These two requirements were found to be incompatible, and the guiding impulse became to assess poverty rather than to provide a suitable and comfortable refuge for the aged.

This basis of poor relief, introduced in 1845, continued unchanged until the Local Government Act, 1929, which may be said to have begun the breaking down of the old Poor Law. It is a matter of recent history how changes within the past two decades prepared the way for the new approach to social welfare involved in the legislation of the last two or three years.

III.—The Extent of the Problem in Britain.

It has been estimated that at the zenith of the Roman Empire the expectation of life of the individual at birth was some thirty-five years. It is probably less than this in India to-day. In Europe and parts of America it was no more than thirty years towards the end of the eighteenth century. In 1845 the life expectancy at birth in Scotland, without reference to sex, was forty-one years. At the beginning of the twentieth century, as a direct consequence of the abrupt lowering of the death rate in the younger age groups, especially among infants and children, a sudden increase began, until to-day the figure stands at about sixty-two.

Although the onset of old age varies in individuals, modern legislation has made it necessary to fix an arbitrary time limit, and for various reasons old age has been taken to begin at sixty in women and sixty-five in men. These political ages for the commencement of senescence were established by the Widows', Orphans' and Old Age Contributory Pensions Act, 1925, as the earliest ages at which State pensions would be paid, and most published statistics accept them as marking the onset of old age. It was on this basis that the Rowntree Committee, appointed by the Nuffield Foundation in 1947, carried out their investigations. The report of this Committee estimated that number of persons of pensionable age as 5,795,000, out of a total population of 43,208,000 for England and Wales, or 13·5 per cent. of the total population. In Scotland, however, statistics give the lower figure of 12 per cent. for this group of the population.

IV.—The Effects of Emigration and Immigration on the Scottish Population.

One factor which obviously influences the proportion of old people in the population is the effect of emigration. Detailed figures have been obtained from the Registrar-General of Scotland of the extent of emigration from Scotland overseas and immigration to Scotland from overseas during the three-and-a-half-year period, January, 1946, to June, 1949. No account is taken in these figures of the interchange of population which constantly occurs between Scotland and England. Abstracts from these returns show that, while 154,586 persons (67,506 males, and 87,080 females) emigrated from Scotland during this period, 85,565 persons (40,907 males and 44,658 females) immigrated to Scotland. Further analysis shows that of the total emigrants 62·7 per cent. were in the age-group 15-44, a percentage considerably higher than the proportion of that group in the Scottish population, which is 44 per cent. In contradistinction to this, the percentage of emigrants in the old-age group (male 65 +, female 60 +), was only 7 per cent., as compared with 12 per cent. for the similar group in the Scottish population. Analysis of the ages of persons entering Scotland from overseas showed very similar results; the figures were 57 per cent. in the group 15-44, and 8 per cent for the old-age group.

Emigration from Scotland, therefore, is extracting more than its rightful share of the young and vigorous and failing to remove its fair proportion of the elderly. Thus, a cumulatively heavier burden is falling on the remaining working population. Immigration is actually somewhat lessening the effect of this loss, as the proportion of old persons among those entering the country is less than at present existing in the Scottish population (see Appendix I).

Subtracting the number of immigrants from the number of emigrants, the net loss of the Scottish population during the three and a half years period was 69,021. When this net loss is analysed, it is found that 48,386 persons were in the age-group 15-44 and only 4,422 in the old-age group. If the numbers lost had been distributed according to the age and sex distribution of the Scottish population, the number in the first group would have been 30,369, while the number of elderly persons leaving would have been 8,282. Thus, Scotland has lost an excess of 18,017 young persons and retained 3,860 old persons during this period. English figures will no doubt follow the same trend and although it is right to populate the colonies and dominions with British

stock, it would be better for the United Kingdom if the Commonwealth countries could be persuaded to take a higher proportion of elderly persons.

The extent of the old age problem and the methods adopted for its solution vary considerably throughout the country, yet there is much of common interest to be found in a study of the difficulties which confront a large industrial city.

V.—The Problem of the Aged and Chronic Sick in the City of Glasgow.

The estimated population of Glasgow is just under 1,100,000 persons, and, based on the Registrar-General's returns, it is calculated that there are 104,200 old persons in the city. (See Appendix II.) Although an exact figure can be provided only by new census returns, this number is accurate enough for our purpose, which is to classify the members of the large group in order to ascertain the extent to which their requirements can be met. For this purpose, I have adopted the following divisions :

Group I.—Old persons mentally and physically active, living a normal life in accommodation arranged by themselves. These comprise by far the largest number. Estimated at 93,000.

Group II.—Old persons similar to above but requiring some assistance to enable them to continue an independent existence. Estimated at 5,000.

Group III.—Old persons too feeble to manage their own homes, but not physically or mentally ill. Estimated at 3,000 ; about one in thirty-five of pensionable population.

Group IV.—Old persons requiring hospital treatment for a long or short period (mental cases excluded). Estimated requirements for these, 2,500 beds.

Discussion on the Extent to which the Present Services meet these Requirements.

Group I.—Old persons, mentally and physically active, living a normal life in accommodation arranged by themselves.—The principal requirements of those in this group is that they should remain integral

parts of the community. Their activity and interest in life should be encouraged. The majority in this category live in their own homes ; some reside with their families or their friends ; a few live in hotels or boarding houses ; and a small number reside in special dwellings provided by the local authority.

Adequate housing of the population is a first essential if the standard of health of the community is to be maintained and improved. Industrial cities are at a disadvantage here, because there still remains much unsatisfactory building from the period of rapid expansion following the industrial revolution. It should not be forgotten that in 1939, when England was approaching saturation in her housing programme, Scottish housing was still badly in arrears. This relative disadvantage still exists. A national allocation of houses on a population basis takes no account of this fact. *Allocations should be based on need and not on population.* Most of the early building in Glasgow was of the tenement type, which has led to high site-density, and this, together with the small size of dwelling constructed (50 per cent. of Glasgow's dwellings are of one and two apartments) has resulted in severe overcrowding. In addition, the city's population has doubled since 1890.

There is a tremendous leeway to make up before the city can be said to be adequately housed. In fact, the health and welfare department of the Corporation estimate that a rate of building of not less than ten thousand houses per year will be necessary for the next ten years if the very minimum needs of the city are to be met and provision made for the homeless, the grossly overcrowded, and for families living in unfit and dangerous properties. Since 1919 the local authority has erected sixty-eight thousand houses in Glasgow, but of these only one hundred and twenty-four (or approximately 0·2 per cent.) were specifically designed for the housing of old persons. This number is completely inadequate, for it is now generally accepted that when new municipal schemes are planned some 4 per cent. of all the houses should be designed for this purpose. In fact, there is a definite advantage to the local authority no less than to aged persons in the construction of a proportion of these small dwellings. Some can be utilized for other purposes, for example, to house single persons whose future accommodation is a difficult problem when clearing slum areas, or to provide alternative accommodation for the last remaining member of a family occupying a large local authority house, thereby releasing it for tenancy by a family.

The inadequate housing of so many of this section of the population adds tremendously to the problem of domiciliary care and curtails much of the effort which is given so readily by neighbours and voluntary bodies.

Next to inadequate housing, *loneliness* ranks as the most distressing feature of old age. Voluntary associations have realized that in this matter they can be of the greatest service. Old people's welfare committees have been growing in number throughout the country, and are particularly useful in bringing together all the voluntary organizations within the district, as well as representatives of the welfare section of the local authority, thereby ensuring co-operative effort and the avoidance of overlapping. The Glasgow Old People's Welfare Committee was formed in January, 1948, when the Glasgow Society of Social Service convened a meeting at which over thirty representatives from the State, local authority and voluntary bodies were present. The City of Glasgow Society of Social Service undertook to act as the committee's agents, and placed the head office and six district offices, with trained administrative and social work staff, at its disposal.

This new committee is not a relief-giving body. Its main function is to organize voluntary effort, and twenty clubs with a membership of two thousand five hundred old people have been opened. Each member pays a nominal weekly subscription of twopence, thus maintaining the principle of membership. These clubs have been an unqualified success, but the need for more is great, and it is hoped shortly to increase the number to fifty. Four hundred voluntary helpers, drawn from the forty-two affiliated bodies, have been recruited, of whom one hundred and thirty act as voluntary visitors to some two hundred and fifty old people living alone and confined to their homes. Two clubs attached to the Red Cross provide transport facilities for their members to and from their homes.

The difficulties that perplex old people and those who have their care at heart are extraordinarily varied. Old folk rarely conform to any one type, nor do their problems run in any one groove. Theirs are essentially individual problems, and from that fundamental recognition springs the need for voluntary effort, which should be as free as possible from rigidity of outlook. One cause of worry to many old people is the fear that they will fall within the ambit of a machinery that is officialized. The problems presented by old people cannot be

other than many-sided, because the capacity of old people to support, care for and entertain themselves varies enormously, from the self-supporting on the one hand to the completely bedridden on the other. Some have to be provided with everything; others require only a benevolent background with the comforting knowledge that should the need arise there are people ready and willing to help them to meet any emergency.

Before proceeding to consider the next group, some reference must be made to elderly persons who choose to reside in model lodging houses. Medical officers and social workers in cities are only too familiar with the accommodation provided in model lodging houses, in which the inmates sleep in dormitories, cook their meals over a common stove, and utilize the kitchen as a common dining-room. Under the Public Health (Scotland) Act, 1897, these premises must be registered and are subject to certain rules and regulations. Although they are usually run for profit, some are owned by local authorities or by voluntary organizations, such as the Salvation Army, and the charges vary from tenpence to one shilling and threepence per night. Formerly, the occupants were chiefly vagrants, but with the decline in vagrancy the model lodging house population has changed in character and at the same time greatly decreased in number. Now the majority are permanent residents, of whom a substantial proportion are old people who prefer the discomfort and bleakness of this type of accommodation to the regulated life of an institution. Within Glasgow there are twenty-seven model lodging houses, situated mainly in the central and eastern wards. During the fourth week in January of this year all these premises were visited, and it was found that 1,514 men and 152 women (i.e. more than one-third of the occupants) were of pensionable age. Their surroundings were such that, although much work will be required to make the premises less dreary and forbidding, yet much could be done for the inhabitants if religious denominations interested themselves in their welfare. (Further details of model lodging houses are given in Appendix III.)

Group II.—Old persons similar to the above but requiring some assistance to enable them to continue an independent existence.—It was the obvious intention of the National Health Service Act that persons in this group should be the particular concern of the domiciliary services of the local authority. Satisfactory assistance readily available at little or no cost to the individual can frequently prevent complete breakdown of these old persons.

The domiciliary services administered by the local authority include health visitors, district nurses and home helps. In Glasgow most of the health visitors are attached to the maternity and child welfare, education health, tuberculosis and V.D. services, but some act as housing nurses, working in conjunction with the divisional sanitary inspectors. The principal function of the health visitor is to raise the standard of hygiene in the home, but she frequently becomes the confidant of the family in all matters relating to health and housing. She visits every home from which an appeal for the meals-on-wheels service is made, and reports on the circumstances to the medical officer of health. He, in turn, advises the W.V.S., who run this very useful service in conjunction with the local authority. Owing to the difficulties in the distribution of meals to scattered individuals, its scope is still limited to just over one hundred individuals, which covers a very small proportion of the possible applicants.

When the local authority became responsible for the home nursing service it retained the Glasgow District Nursing Association (Queen's Nurses), one of the most efficient home nursing services in the country. Although the new scheme is administered by the local authority, the Association is given autonomy for training and day-to-day arrangements. The corps of one hundred nurses works in close co-operation with the general practitioners, and during 1949 paid over 178,000 visits to elderly persons. No praise is too high for the magnificent work carried out by these women, frequently under trying circumstances. The following are two examples of cases benefiting by their care and attention :

(1) Married man, aged eighty-two. Hemiplegia of two years' duration ; wholly bedridden and requires assistance in feeding ; doubly incontinent, mentally confused ; seriously deaf. Wife, aged eighty-three, wholly bedridden with rheumatoid arthritis. Both looked after by a daughter, who therefore cannot earn her own living ; this daughter is not strong and is subject to fainting attacks. Another daughter goes out to work but has to share night nursing and often gets little sleep.

(2) Widow, aged seventy-two. Diabetes, with amputation of leg. Has been ill for thirteen years. Husband died, also of diabetes. Her six children died in infancy, and there are no living relatives. She is incontinent and has seriously defective vision. Has a room to herself in the basement of a tenement house. Landlady has cared for her during the whole period of her illness. House is unsuitable, although it has an inside w.c. There is no bath or washbasin, only a sink in the kitchen. There are other lodgers.

Glasgow initiated a home help service as long ago as August, 1944, and at present the total number employed by the department exceeds eight hundred. Some two hundred and fifty helps are allocated to the maternity section, forty to the tuberculosis section, and the

remaining five hundred and fifty form the general purposes group, on which calls are made from every section of the community. Only a proportion, therefore are available for old persons, and the demand for their services has been so great that the supervisor has found it necessary to arrange that some home helps should each look after two or three old persons. But, quite apart from this, the most serious pressure on the home help service arises from the number of calls made on it for old persons who should be in hospital. In fact, many home helps are acting as auxiliary nurses. In January of this year it was found necessary for the local authority to allocate permanent home helps to some one hundred and eighty old persons who were physically or mentally incapable of doing anything for themselves, but, unfortunately, some old people are so incapacitated that their houses have become dirty and verminous, and consequently home helps refuse to work for them. That the home help service is thus being misused, the following piteous cases illustrate :

(1) Mr., Mrs. and Miss M. Husband and wife both over eighty. Wife bedridden and husband very frail. Daughter has both legs amputated, but can propel herself about the house in a wheel chair ; she is learning to use her artificial legs. House is clean. Permanent home help allocated.

(2) Mr. C., aged sixty-three. Suffers from mental confusion and blindness. Lives alone in a poor and neglected single room, and is entirely dependent upon the home help. He is alone from noon on Saturday until 9 a.m. on Monday. This man urgently needs care and attention in hospital.

(3) Mr. and Miss C., aged eighty-two and seventy-four. Brother and sister. Occupy the same bed. Mr. C. is dying and Miss C. is seriously ill. On 26th January home help could not get inside the house. Police were called to open the door, and Miss C. was found lying helpless on the floor. Both should be in hospital.

(4) Miss S., aged sixty-one. Completely crippled by rheumatoid arthritis and lives alone. Is unable even to make herself a cup of tea, and is wholly dependent on the home help, who has been in attendance since April, 1947.

(5) Miss N., aged seventy. Lives alone in a single end. Has advanced heart disease. Has had sixteen home helps over the past three years, all of whom have refused to continue working for her, as she is extremely impertinent and ungrateful.

It is evident that the home help service has come to stay, and that it will expand still further in the very near future.

Many old folks cling obstinately to their independence in their own homes, no matter how poor and unsuitable these may be. There is no place like home. Even in the unlikely event of local authorities being able to supply sufficient residential homes the problem will always be largely a domestic one. It is common knowledge that

women of advanced age outnumber men, but though their rate of mortality is lower their rate of morbidity is very similar. They none the less need help with domestic duties.

The ailments which cause old people to be confined to their homes are chiefly arthritis, incontinence, breathlessness, partial paralysis as the result of previous strokes, general weakness, and painful feet. Most of these disabilities are difficult to deal with at home, but something can be done to alleviate the discomfort caused by painful feet. Investigations show that 40 per cent. of women over sixty years suffer from foot complaints, and there are good reasons, both on humanitarian and economic grounds, for the addition of chiropody to the domiciliary services. In the case of old persons entirely dependent on their pension this service should be provided free.

Group III.—Old persons too feeble to manage their own homes, but not physically or mentally ill.—Under section 21 of the National Assistance Act, it is now a duty for the local authority to provide residential accommodation for this group. There are at present in Glasgow 1,600 beds for this purpose, 786 belonging to the health and welfare department of the Corporation, 753 provided by voluntary and religious bodies, and sixty in private rest homes or nursing homes. The local authority accommodation varies from the typical poor law institution to the well-known Crookston Homes, consisting of small modern cottages built round a central home for single persons. The voluntary homes, of which there are thirteen, are all large, converted houses, except for two fairly large institutions specially built for the purpose.

Local authorities, in framing their schemes, were asked to mention not only their immediate programme, but what they hoped to accomplish by 31st March, 1954. Their schemes estimated that the total number of aged persons for whom they would need accommodation by that date would be 52,000, or rather less than one per cent. of the five-and-three-quarter million old people of pensionable age in England and Wales. This figure is, at best, an estimate, and, in fact, may prove to be an under estimate. Sir William Douglas,* in October, 1949, stated that since the end of the war 155 small homes, providing accommodation for 4,800 old people, had been opened, and a further 273 homes purchased with the Ministry's approval; in addition, 164 properties had been submitted to the Ministry for approval.

* Speaking at 4th National Conference on the Care of Old People.

All we can show in Glasgow over this period is one home purchased before, but occupied since July, 1948, and a further one which we hope to have ready by April, 1950. On the basis of Sir William Douglas's figures, and ignoring the fact that our city is one of the worst overcrowded in Britain, we require accommodation for at least one per cent. of 104,000 persons, or 1,040 places, which, at an average of thirty per home, would mean thirty-four homes, or approximately one for each municipal ward of the city ; and this by March, 1954. I think you will agree that our progress is anything but satisfactory. Why should this be so? It is due largely to the slow, tedious and tiresome method of purchasing suitable premises when they come into the market. Our experiences in this direction are worth relating.

Since 5th July, 1948, the manager of works of our health and welfare department has made enquiries about ninety-seven houses for the accommodation of old persons, of which twenty-one were found suitable for the purpose, but in only one case have negotiations to purchase been carried through expeditiously. In this instance, the Committee agreed to purchase in February, 1949 ; the purchase was approved at the end of May and entry obtained in June. Private individuals have already bought seventeen of the remaining twenty houses, mainly because the method of purchase insisted upon by the Government enabled them easily to get in ahead. Suitable houses may be lost because of protracted negotiations or because the Corporation may not exceed the district valuer's price, as is shown in the following examples :

(1) A house adjacent to one purchased recently by the Corporation came into the market and the two premises could readily have been operated in conjunction. Negotiations were so protracted that a private purchaser stepped in and secured the property.

(2) The price of one of the premises at present under consideration was fixed by the district valuer at £400 less than that asked by the proprietor. A private buyer may be prepared to pay the owner's price, whereas the Corporation is not permitted to exceed that of the district valuer.

Unless there is a drastic change and simplification in the present method of purchasing suitable premises there is no hope of our being able to fulfil our obligations.

Group IV.—Old persons requiring hospital treatment for a long or short period.—Many difficult issues have arisen since July, 1948, but none which presents greater difficulty than the care of the chronic sick. This is not a new problem, for it caused grave concern to local

authorities who had previously to attempt its solution. What has brought it so much into evidence is that the regional hospital boards which have taken over the hospitals have terms of reference so different from those existing before July, 1948, that their responsibility is limited solely to hospital care. These regional boards surely cannot remain complacent when they find that a high proportion of their available beds is occupied by patients requiring little medical attention, but for whom social circumstances alone have determined their admission and will prevent their discharge.

The hospital surveys completed during the war years provided information on which the Ministry of Health calculated the bed requirements of the chronic sick as between two and two-and-a-half beds per thousand of the general population.[1] Accepting the latter of these estimates, our city of 1,100,000 persons would require 2,750 beds for this purpose. As our present requirements are 1,800 medical beds for the old-age group alone, the figure of 2,750 beds for all purposes, including surgical beds, is an underestimate.

In January, 1950, returns of the total number of patients and of old persons occupying beds in the medical wards of Glasgow hospitals were made by the superintendents, and corresponding figures were obtained from the sick-bay accommodation of the municipal welfare institutions and from all private nursing homes. At the same time, the number of persons on the waiting list for admission to the medical wards of the ex-municipal hospitals was ascertained. The figures make interesting reading when compared with a similar review by the public health department in January, 1939 (see Appendix IV). Briefly, it is shown that, whereas in January, 1939, there were 1,269 medical beds available in the four ex-municipal hospitals, in February, 1950, there were only 759 beds, a decrease of 510 beds. This is far from being satisfactory when one considers that there has been an increase of staff from 766 full-time and no part-time nurses in 1938 to 788 full-time and 237 part-time nurses in 1950 (see Appendix V). The three ex-voluntary hospitals, on the other hand, have maintained their original number of 540 beds for medical cases, and the sick-bay accommodation at the municipal welfare institutions has also remained, as before, around 700 beds. But the need is increasing, not diminishing, or even stationary.

Before the war, a waiting list for medical beds in the four ex-municipal hospitals occurred only in January of each year, and rarely reached 100. On 27th January, 1939, the list reached its maximum

of 103 persons, of whom 70 per cent. were admitted within three days. On 15th February, 1950, the waiting list was 752 persons, of whom no less than 522 were of pensionable age, 319 over seventy years, and 101 over eighty years (see Appendix VI). The rate of admission is so slow that many will probably die before there is a vacancy. The reasons for the growth of the waiting list are as follows :

(1) Shorter working hours of staff—the principal factor in causing the present difficulties.

(2) Increased proportion of staff performing specialized work and administrative duties.

(3) *Fewer available staffed beds.*—There is an all-over deficit of 400 since 1939, while 500 unstaffed beds are lying empty in the ex-municipal hospitals. The ex-voluntary hospitals and sick bays of municipal welfare institutions have their full complement of nurses and no unstaffed beds.

(4) Consequent *slower rate of admission*, which is only 43 per cent. of the average rate of the period between 1938 and 1941.

(5) Poorer supervision of hospitals through responsibility being spread over so many hospital management boards. The majority of the members of these boards have little or no idea of the domiciliary position and are in a weak position when discussing matters with superintendents.

(6) There has been an actual increase in the demand for accommodation of 40 per cent. over the 1944 average.

The prospect for the hospitalization of old persons who require medical attention is therefore most unsatisfactory. Current figures show that 408 are at present accommodated in the medical wards of Glasgow hospitals, a further 571 in the sick-bay accommodation of the welfare institutions, and fifty in private nursing homes, making a total of 1,029. In addition, it is known that 522 old persons requiring medical treatment are at present on the waiting list of ex-municipal hospitals, and it is estimated that a further 100 are awaiting admission to the ex-voluntary hospitals. To abolish the present waiting list, 620 additional beds for this group are urgently required. It would, indeed, be no overestimate to provide 1,800 beds for the medical needs of the old-age group alone. Although there is no waiting list for surgical wards, there is a number of old people who temporarily or permanently occupy this accommodation ; the majority in the latter category are persons with un-united fractures, especially of the neck of the femur.

Under the arrangement which existed before July, 1948, the municipal general hospitals accommodated a much higher percentage of aged persons and chronic sick than did the voluntary hospitals. So much was this so that difficulties arose about the training of nurses

because of the large proportion of elderly and infirm in some of the wards. Frequently assessments showed figures in excess of 50 per cent. What is the present position?

The percentages of persons of pensionable age among the patients in the various Glasgow hospitals vary at present from 17 per cent. to 38 per cent., while the sick-bay portion of the welfare institutions maintains 80 per cent. The difference is now much less marked between the proportions of elderly persons accepted by the ex-municipal hospitals and the ex-voluntary hospitals, respectively, largely because of the growing practice of superintendents of ex-municipal hospitals to admit people in younger age groups to the exclusion of elderly persons, in an attempt to upgrade their hospitals. In defence of this policy, they argue that, under the National Health Service Act, the burden should be equally distributed over all the hospitals in the region. Although the old Poor Law had defects, one distinct advantage was that there was always a statutory officer who had powers to insist on admission to hospital in cases of need. This benevolent compulsion can no longer be exercised, so old persons must take their chance along with the rest of the population, and many hundreds of old folks who require care and attention must remain at home.

In what way is this most difficult problem to be solved? I would suggest that the most reasonable solution would be to remove the care of the chronic sick and infirm from the regional hospital boards altogether and leave them to deal with the acute sick, for whom their hospitals have been principally designed, equipped and staffed.

In support of this view, reference should be made to McKeown and Lowe's survey[2] of the patients in Birmingham hospitals for the chronic sick, made in 1949, which shows that fully 60 per cent. of the inmates required only nursing and occasional medical attention, that 20 per cent. required supervision because of their abnormal mental state, and that 20 per cent. required skilled nursing and medical attention more frequently than once a week. Practically all the patients were of pensionable age, 85 per cent. being over sixty-five years.

Recently, Alstead,[3] surveyed the long-term sick in the University Medical Clinic at Stobhill, and reported that the work of the unit was severely curtailed by the major difficulty of the proper disposal of old people who were ambulant but frail. It seems that there is, unfor-

tunately, no hope of freeing large numbers of hospital beds by dismissing elderly patients who now occupy them, for some patients have no home to which to return while others have no wish to leave.

Thus a very sound argument can be advanced in support of the introduction of suitable accommodation less elaborately equipped and expensively staffed than the modern hospital ward. The local authority should be empowered to make arrangements for the accommodation of persons in this group under the care and after-care section of the National Health Service Act (section 28 of the English Act and 27 of the Scottish Act). Such accommodation would be something between the old persons' home and the hospital, and would not require a full complement of fully-trained nurses. Enrolled assistant nurses and ward orderlies could carry out all the necessary nursing work under the supervision of a trained sister. Apart from an enormous saving in cost, such accommodation would permit the hospitals to remove their wards from the untreatable or incurable case and would avoid the undesirable state of affairs whereby hundreds of old infirm persons are left alone in unsuitable surroundings.

VI.—Senility.

A few words on senility may properly close this paper. Senility, with its atrophy, apathy, feebleness and dementia, is the last stage of the wearing-out process, and as a result old people sometimes become forgetful and confused in mind. Prior to the National Health Service Act, county and burgh councils accommodated such persons in welfare institutions. Today, however, there have been instances of old people, whose only disability is senility, being certified unnecessarily and sent to mental hospitals, because there is no other way to deal with them under the provisions of the new legislation. Lack of beds for mental observation in general hospitals has resulted in the Lunacy Act being misused as a means of gaining admission to mental institutions. In my opinion, responsibility for the care and maintenance of such old persons should be a function of the welfare section of the local health authority. Patients should be admitted without certification to welfare homes, which should seldom exceed one hundred beds in size and should be supervised by the medical officers attached to the mental services section of the local authority.

If we survive, old age comes to us all in good time, and sickness may come with it ; but it is not right that protracted age should live

in protracted woe. It is our duty to see that help for the aged is so organized that none, in whatever circumstances, shall be unable to obtain it.

References.

1 Ministry of Health Hospital Surveys (H.M.S.O., 1945; 1946).

2 Lowe, C. R., and McKeown, T. *British Journal of Social Medicine*, July, 1949, 110.

3 Alstead, S. Personal communication.

Summary.

The paper reviews the needs of the aged and chronic sick in a large industrial city, and considers the relief and treatment available. The following matters bearing on the problem are chiefly considered :

(1) The effect of post-war emigration in adding to the burden on the community of the old and infirm.

(2) The housing problem in the city and the necessity for priority rehousing on the basis of need, not on population.

(3) The present domiciliary services and the unavoidable use of the home help service due to lack of hospital accommodation.

(4) A freer hand for the local authority in obtaining hostel accommodation, for which a plea is made.

(5) The growing necessity for providing special accommodation intermediate between the hospital and the home.

(6) The diminishing number of medical beds available for the chronic sick and elderly.

(7) Common lodging houses.

(8) The importance of voluntary assistance.

(9) Arrangements for senile persons which will avoid certification.

Appendix I.

Migration of Population—Scotland.

Period 1st January, 1946-30*th June*, 1949 (*three-and-a-half years*).

Total emigrants (all ages)—		Total immigrants (all ages)—	
Males	67,506	Males	40,907
Females ...	87,080	Females	44,658
Both sexes ...	154,586		85,565

Migration according to Age and Sex.

Age Group.	Sex.	Emigrants. Number.	Emigrants. % of total emigrants of same sex.	Total (both sexes).	Immigrants. Number.	Immigrants. % of total immigrants of same sex.	Total (both sexes).
(*a*) 15-44	M.	41,029	61	96,996	25,343	62	48,610
	F.	55,967	64		23,267	52	
(*b*) 65+	M.	3,107	5	11,219	1,978	5	6,797
60+	F.	8,112	9		4,819	11	

Comparative percentages of Scottish Population in Age Group 15-44 *and Old Age Group* (*Males* 65+, *Females* 60+) *as at mid*-1948.

Total Population—

Males	2,534,100
Females	2,667,100
Both sexes	5,201,200

Percentage of Total Population for each Age Group and Sex.

	Male. %	Female. %	Both Sexes. %
Age-group 15—44	46	42	44
Age-group Male 65+	9	—	12
Age-group Female 60+ ...	—	15	

Population figures as published by the Registrar-General in the "Annual Abstract of Statistics," issued by the Central Statistical Office.

APPENDIX II.

Estimated population of the City of Glasgow ...	1,100,000
Males over 65	36,900
Females over 60	67,300
Both sexes	104,200
Percentage of total population	9·6
Percentage of total Scottish aged population ...	16·57

Obtained from Registrar-General's returns.

Appendix III.

Model Lodging Houses—Glasgow.

There are twenty-seven model lodging houses in the city registered to provide an approximate total of 5,600 beds, not all of which are occupied every night. Four of these model lodging houses are for female and twenty-three for males. Four of the latter are used by seamen (two for Asiatics and two for Europeans) and contain no old people.

All of these premises were inspected on the night of 25th January, 1950, when the number and age distribution of the occupants were found to be as follows :

	Number.	Total inmates.	Under sixty years.	Over sixty years.	Percentage of old age group to total.
Female lodging houses ...	4	465	313	152	33
Male lodging houses ...	19	4,342	2,828	1,514	35
Male lodging houses for seamen only	4	294	294	—	—

Appendix IV.

Glasgow—Number of Beds occupied by Medical Cases.

	At 15th February, 1950.				At 29th Jan., 1939.
	Total medical beds.	Old age group (M. 65+ F. 60+).	Percentage of total beds occupied by old age group.	Average percentage for each group.	Total medical beds.
Ex-Municipal—					
Stobhill	292	75	26		460
Southern General ...	315	116	36		521
Western District ...	75	20	23		127
Eastern District ...	77	29	28	32	161
	759	240			1,269
Ex-Voluntary—					
Glasgow Royal Infirmary	215	37	17		215
Western Royal Infirmary	175	41	23		170
Victoria Infirmary ...	150	41	34	22	155
	540	119			540
Ex-Public Assistance—					
Foresthall	629	481	76		630
Crookston	90	90	100	80	75
	719	571			705
War Emergency Accommodation—					
Gartloch (Medical Beds)	128	49	38	—	
	2,146	979			2,514

Appendix V.

Comparison of Numbers of Full-time and Part-time Nursing Staff employed in the General Wards of the four ex-Municipal Hospitals for the years 1938 *and* 1950.

	February, 1938.	February, 1950.
Whole-time—		
Administrative and Specialized nursing staff ...	29	39
Ward sisters	90	94
Staff nurses	48	95 (including 8 male nurses)
Student nurses	599	544 (including 86 male nurses)
Assistant nurses	—	12
	766 (all female)	784 (694 female ; 94 male)
Part-time	Nil	237

Appendix VI.

Total waiting list for medical cases for ex-municipal hospitals at 15th February, 1950, was 752, of which 522 (69 per cent.) were in old-age group.

Analysis of the 522 *Patients in Old-age Group according to Age.*

Sex.	60-64 years.	65-69 years.	70-79 years.	80+years.	Total.
Male	*	50	77	28	155
Female ...	78	75	141	73	367

* Old age group=Males 65+ Females 60+.

SECTION XV.

LEGISLATION.

The following Acts of Parliament, Regulations, etc., dealing directly with Public Health in Scotland or having a bearing thereon came into operation during the year :—

Adoption of Children Act 1949.—Amends the law relating to the Adoption of Children; and for related purposes.

Education (Scotland) Act, 1949.—Amends the provisions of the Education (Scotland) Act, 1946, relating to attendance at junior colleges, to the powers of education authorities to provide education for pupils belonging to the areas of other authorities and to enable persons to take advantage of educational facilities, and to other matters; and amends the provisions of other Acts relating to defective children and the employment of children.

Housing (Scotland) Act, 1949.—Amends the Housing (Scotland) Acts 1925 to 1946; promotes the improvement of housing accommodation in Scotland by authorising the making of contributions out of the Exchequer and of grants by local authorities, etc.

Milk (Special Designations) Act, 1949.—Renders compulsory the use of special designations in sales of milk by retail in specified areas, enacts certain provisions ancillary thereto as to the use of such designations, and amends certain enactments in relation to such designations.

National Health Service (Amendment) Act, 1949.—Amends the National Health Service Act, 1946, and the National Health Service (Scotland) Act, 1947, and otherwise amends the law in relation to services provided under the said Acts.

Nurses (Scotland) Act, 1949.—Reconstitutes the General Nursing Council for Scotland and otherwise amends the Nurses (Scotland) Acts, 1919 to 1945, and makes further provision with respect to the training of nurses for the sick.

Prevention of Damage by Pests Act, 1949.—Re-enacts with modifications the Rats and Mice (Destruction) Act, 1919; makes permanent provision for preventing loss of food by infestation, and purposes connected therewith.

Water (Scotland) Act, 1949.—Amends the law with respect to rating and charging for water supplies in Scotland; amends Part V of the Local Government Act, 1948, with respect to the ascertainment of the standard amounts thereunder in Scotland; increases the financial assistance that may be given to local authorities in Scotland under the Rural Water Supplies and Sewerage Act, 1944; amends the Water (Scotland) Act, 1946; and other purposes connected therewith.

CIRCULARS, ORDERS, REGULATIONS, ETC., ISSUED IN 1949.

S.I.=Statutory Instruments. *D.H.S.=Department of Health for Scotland.*

Care of the Aged—

S.I. 1668 (S. 117) of 5/9/49, National Assistance (Registration of Homes) (Scotland) Regulations, 1949.

D.H.S. Circular 71/1949 of 9/9/49, National Assistance Act, 1948. Registration and Inspection of Disabled and Old Persons' Homes.

D.H.S. Circular 65/1949 of 6/10/49, Welfare of Old People.

Education—

D.H.S. Circular 57/1949 of 8/8/49, School Health Service. Annual Selection of Age Groups for Routine Medical Inspection.

Food—

D.H.S. Circular 20/1949 of 15/3/49. Meat Inspection. Livestock (Restriction on Slaughtering) Order, 1947.

S.I. 614/1949 of 29/3/49. Mineral Oil in Food Order, 1949.

Circular M.F. 5/49 (United Kingdom) of 14/4/49. Mineral Oil in Food Order.

D.H.S. Foods. Letter (254634) of 28/4/49. Public Health (Imported Food) (Scotland) Regulations, 1937 to 1948. Government of Italy.

S.I. 870 (S.47) of 4/5/49. Food and Drugs—Whalemeat (Scotland) Regulations, 1949.

S.I. 894/1949 of 10/5/49. The Oils and Fats Order, 1949.

D.H.S. Circular 30/1949 of 19/5/49. Food and Drugs—Whalemeat (Scotland) Regulations, 1949.

S.I. 1047 (S. 68) of 31/5/49. Ministers of the Crown (Transfer of Functions). Transfers of Functions (Food and Drugs) (Scotland) Order, 1949.

D.H.S. Foods Letter (254634) of 7/6/49. Public Health (Imported Food) (Scotland) Regulations. United States of America.

D.H.S. Foods Letter (312854/6) of 30/6/49. Food and Drugs (Whalemeat) (Scotland) Regulations, 1949. Kingdom of Denmark.

D.H.S. Circular 56/1949 of 5/8/49. Slaughter of Animals (Scotland) Act, 1949.

D.H.S. Memo. No. 2/Whalemeat. Sept., 1949. Inspection of Whalemeat.

D.H.S. Foods Letter (254634) of 9/9/49. Public Health (Imported Food) (Scotland) Regulations, 1937—1948. Government of Hungary.

D.H.S. Circular 87/1949 of 19/10/49. Defence (Sale of Food) Regulations 1943.

Hospitals—

D.H.S. Circular 21/1949 of 17/3/49. National Health Service (Scotland) Act, 1947. Co-ordination of the work of Hospital Almoners with the Local Health Authorities, Part III Services.

D.H.S. Memo. R.H.B. (S) (49) 1. of 12/1/49, Part III Services.

Housing—

D.H.S. Circular 66/1949 of 30/8/49. Housing (Scotland) Act, 1949.

D.H.S. Circular 91/1949 of 5/11/49. Town & Country Planning (Scotland) Act, 1947. Mineral Working.

D.H.S. Circular 100/1949 of 18/11/49. Housing. Three-apartment Houses.

D.H.S. Circular 95/1949 of 29/11/49. Town & Country Planning (Control fo Advertisements) (Scotland) Amendment Regulations, 1949.

D.H.S. Circular 103/1949 of 1/12/49. Reduction of Housing Expenditure.

D.H.S. Memorandum 106/1949. December. Housing (Scotland) Act, 1949. Part II. Improvement of Housing Accommodation.

Infectious Disease—

S.I. 1945 (S. 135) of 18/10/49. Public Health (Infectious Disease) (Scotland) Amendment Regulations, 1949. (Notification of Whooping Cough).

D.H.S. Circular 47/1949 of 30/6/49. Diphtheria Immunisation. Annual Return.

Local Government—

Department of Health. Code of Modified Provisions of the Burgh Police (Scotland) Acts, 1892-1903.

Milk—

S.I. 1856 (S. 121) of 1/10/49. Milk (Special Designations) (Scotland) Amendment Order, 1949.

D.H.S. Circular 85/1949 of 4/10/49. Milk (Special Designations) Act, 1949, and Milk (Special Designations) (Scotland) Amendment Order, 1949.

D.H.S. Memo. 84 (Tech.) of 1/10/49. Milk (Special Designations) Act, 1949.

Port Sanitary Administration—

D.H.S. Circular 104/1949 of 7/12/49. Ship-borne Infections.

Tuberculosis—

D.H.S. Memo. 58/1949 of 17/8/49. B.C.G. Vaccination against Tuberculosis.

Ministry of Health and Department of Health Memo. 322/B.C.G. (July, 1949). B.C.G. Vaccination (in conjunction with Tuberculin testing). Medical memorandum.

Vital Statistics—

D.H.S. Circular 49/1949 of 8/7/49. International Statistical Classification of Diseases, Injuries and Causes of Death.

APPENDIX

TABLE I.—Glasgow, 1949.—ESTIMATED POPULATION in each Municipal Ward, Acreage, and Persons per Acre.

Municipal Wards	POPULATION				Acreage	Persons per acre (including Inst'ution and Shipping)
	Without Institutions and Shipping	Institutions	Shipping	Total		
1. Shettleston and Tollcross ...	42,299	160	—	42,459	1,167	36
2. Parkhead ...	20,735	485	—	21,220	819	26
3. Dalmarnock ...	45,505	54	—	45,559	487	94
4. Calton ...	27,333	1,613	—	28,946	404	72
5. Mile-end ...	42,461	420	—	42,881	443	97
6. Dennistoun ...	28,539	—	—	28,539	689	41
7. Provan ...	19,754	1,336	—	21,090	4,846	4
8. Cowlairs ...	30,008	1,283	—	31,291	645	49
9. Springburn ...	25,229	2,730	—	27,959	2,118	13
10. Townhead ...	35,844	2,116	—	37,960	301	126
11. Exchange ...	20,419	3,952	18	24,389	507	49
12. Anderston ...	32,486	1,437	806	34,729	530	66
13. Park	24,884	618	—	25,502	317	80
14. Cowcaddens ...	29,515	698	1	30,214	488	62
15. Woodside ...	29,962	637	—	30,599	170	180
16. Ruchill ...	42,163	859	2	43,024	1,962	22
17. North Kelvin	27,775	85	—	27,860	278	100
18. Maryhill ...	25,037	1,249	4	26,290	2,210	12
19. Kelvinside ...	20,224	1,309	—	21,533	1,160	19
20. Partick (East)	24,450	959	—	25,409	351	72
21. ,, (West)	29,256	—	123	29,379	464	63
22. Whiteinch ...	23,645	732	13	24,390	894	27
23. Yoker ...	28,743	32	—	28,775	1,213	24
24. Knightswood	16,433	203	—	16,636	1,614	10
25. Hutchesontown	34,656	36	—	34,692	387	89
26. Gorbals ...	40,647	276	—	40,923	252	162
27. Kingston ...	29,722	267	163	30,152	355	85
28. Kinning Park	30,555	160	245	30,960	402	77
29. Govan ...	37,548	206	—	37,754	489	77
30. Fairfield ...	22,731	1,795	104	24,630	1,351	18
31. Craigton ...	39,209	353	—	39,562	1,566	25
32. Pollokshields	25,254	2,133	—	27,387	3,239	8
33. Camphill ...	24,513	83	—	24,596	481	51
34. Pollokshaws ...	25,966	113	—	26,079	3,223	8
35. Govanhill ...	27,588	538	—	28,126	365	77
36. Langside ...	25,217	1,036	—	26,253	801	33
37. Cathcart ...	22,101	152	—	22,253	2,737	8
City	1,078,406	30,115	1,479	1,110,000	39,725	28

TABLE II.—GLASGOW, 1949.—INHABITED AND UNOCCUPIED HOUSES IN EACH MUNICIPAL WARD.

MUNICIPAL WARDS	INHABITED HOUSES*				Empty Houses
	1949	1948	Decrease	Increase	
1. Shettleston and Tollcross...	10,798	10,386	—	412	13
2. Parkhead	5,740	5,750	10	—	7
3. Dalmarnock	12,362	12,350	—	12	7
4. Calton...	7,197	7,220	23	—	11
5. Mile-end	11,461	11,476	15	—	7
6. Dennistoun	8,270	8,281	11	—	12
7. Provan	5,360	5,368	8	—	17
8. Cowlairs	8,280	8,391	111	—	3
9. Springburn	6,972	6,604	—	368	12
10. Townhead	9,879	9,906	27	—	9
11. Exchange	4,862	4,880	18	—	7
12. Anderston	8,539	8,547	8	—	4
13. Park	6,640	6,693	53	—	29
14. Cowcaddens ...	7,720	7,720	—	—	8
15. Woodside	8,299	8,314	15	—	12
16. Ruchill	10,210	9,843	—	367	17
17. North Kelvin ...	8,459	8,479	20	—	19
18. Maryhill	7,011	6,907	—	104	10
19. Kelvinside	7,126	7,176	50	—	86
20. Partick (East) ...	7,461	7,458	—	3	23
21. ,, (West) ...	8,631	8,646	15	—	8
22. Whiteinch	6,859	6,860	1	—	6
23. Yoker	7,671	7,653	—	18	12
24. Knightswood ...	4,367	4,338	—	29	6
25. Hutchesontown ...	9,681	9,667	—	14	2
26. Gorbals	9,521	9,553	32	—	11
27. Kingston	7,454	7,456	2	—	4
28. Kinning Park ...	8,241	8,262	21	—	5
29. Govan...	9,336	9,385	49	—	9
30. Fairfield	6,674	6,600	—	74	8
31. Craigton	10,601	10,469	—	132	2
32. Pollokshields ...	6,974	5,951	—	1,023	18
33. Camphill	7,981	7,968	—	13	8
34. Pollokshaws	6,422	5,917	—	505	3
35. Govanhill	8,469	8,464	—	5	3
36. Langside	7,835	7,810	—	25	15
37. Cathcart	7,068	7,066	—	2	8
CITY	296,431	293,814	—	2,617	441

* Includes inhabitant occupiers.

TABLE III.—GLASGOW.—LININGS GRANTED BY DEAN OF GUILD COURT IN YEARS FROM 1919 IN RESPECT OF HOUSES.

Year ending 31st August.	Number of Apartments.						Total.
	1.	2.	3.	4.	5.	6.	
1919-20 (Annual Average)	—	6	692	246	107	29	1,080
1921-25 (do.)	—	308	638	400	234	51	1,631
1926-30 (do.)	—	350	3,067	1,346	448	90	5,301
1931-35	13	349	2,287	1,578	131	23	4,381
1936 ...	—	—	1,462	1,320	290	12	3,084
1937 ...	—	2	687	847	301	34	1,871
1938 ...	—	—	2,017	3,068	824	50	5,859
1939 ...	—	—	2,159	3,324	717	2	6,202
1940-43 ...	—	—	—	—	—	—	—
1944 ...	36	—	—	5	1	—	42
1945 ...	—	—	79	94	5	—	178
1946 ...	33	—	812	2,503	483	12	3,843
1947 ...	—	89	115	994	232	—	1,430
1948 ...	54	24	126	365	2	—	571
1949 ...	86	—	780	1,186	13	—	2,065

TABLE IV.—ABSTRACT OF METEOROLOGICAL OBSERVATIONS TAKEN AT SPRINGBURN PUBLIC PARK.

Months. 1949.	Temperature.			Rainfall.		Sunshine
	Highest Temp. in Shade.	Lowest Temp. in Shade.	Mean Temp.	No. of Days.	Amount Collected in inches.	Hours.
January ...	51	19	40·0	22	3·72	29·8
February ...	51	25	41·1	21	4·05	54·0
March ...	62	26	41·1	16	2·07	112·9
April ...	66	33	47·4	24	3·76	112·3
May ...	72	33	51·6	17	2·13	203·2
June ...	84	39	58·4	10	1·19	253·9
July ...	80	44	60·9	11	2·36	190·4
August ...	77	43	59·9	19	4·66	132·8
September ...	72	43	57·6	11	2·10	98·7
October ...	69	29	51·0	21	5·78	53·6
November ...	53	30	42·7	22	3·75	47·6
December ...	50	24	39·5	28	7·63	20·5
1938	76	20	48·1	242	49·76	1,174
1939	88	18	47·6	212	38·41	1,177
1940	85	6	46·5	210	39·52	1,111
1941	80	12	46·3	204	33·34	1,035
1942	80	18	46·3	220	40·64	1,067
1943	86	23	48·0	252	45·43	1,094
1944	80	21	47·3	231	44·44	953
1945	81	11	48·6	233	43·62	1,199
1946	77	19	47·3	222	39·93	1,220
1947	86	8	46·7	209	38·63	1,086
1948	85	25	48·1	233	53·33	1,157
1949	84	19	49·3	222	43·20	1,310

TABLE V.—GLASGOW.—BIRTHS AND BIRTH-RATES *per Million* IN EACH WARD, FOR THE YEAR 1949, AND NUMBER AND PERCENTAGE OF ILLEGITIMATE BIRTHS.

MUNICIPAL WARDS.	Births 1949	Birth-rate 1949	Birth-rate 1948	Illegitimate Births. No.	Illegitimate Births. % Total Births.
1. Shettleston and Tollcross ...	787	18,535	22,264	36	4·6
2. Parkhead	386	18,190	17,274	28	7·3
3. Dalmarnock	1,038	22,784	26,410	41	3·9
4. Calton	590	20,383	23,646	47	8·0
5. Mile-end	955	22,271	25,851	65	6·8
6. Dennistoun	478	16,749	16,402	23	4·8
7. Provan	368	17,449	16,355	19	5·2
8. Cowlairs	620	19,814	23,275	31	5·0
9. Springburn	492	17,597	16,310	17	3·5
10. Townhead	782	20,601	23,214	44	5·6
11. Exchange	430	17,631	19,269	49	11·4
12. Anderston	738	21,250	23,444	49	6·6
13. Park	418	16,391	12,675	39	9·3
14. Cowcaddens	726	24,029	26,221	56	7·7
15. Woodside	652	21,308	24,853	39	6·0
16. Ruchill	821	19,082	21,434	40	4·9
17. North Kelvin	505	18,126	18,873	24	4·8
18. Maryhill	470	17,877	22,855	30	6·4
19. Kelvinside	257	11,935	10,969	11	4·3
20. Partick (East)	413	16,254	14,093	16	3·9
21. ,, (West)	573	19,504	21,402	27	4·7
22. Whiteinch	373	15,293	17,945	22	6·0
23. Yoker	447	15,534	16,044	19	4·2
24. Knightswood	242	14,529	16,384	12	5·0
25. Hutchesontown	819	23,608	25,224	37	4·5
26. Gorbals	1,010	24,680	27,800	87	8·6
27. Kingston	717	23,780	25,727	46	6·4
28. Kinning Park	584	18,863	24,857	23	3·9
29. Govan	857	22,700	26,706	57	6·7
30. Fairfield	418	16,971	18,573	14	3·3
31. Craigton	606	15,318	14,432	10	1·6
32. Pollokshields	404	14,752	12,286	13	3·2
33. Camphill	310	12,604	12,755	5	1·6
34. Pollokshaws	501	19,211	18,815	25	5·0
35. Govanhill	477	16,959	16,371	15	3·1
36. Langside	327	12,326	12,936	9	2·8
37. Cathcart	272	12,223	12,431	8	2·9
Institutions	60	—	—	32	—
Harbour	—	—	—	—	—
CITY	20,923	18,849	20,083	1,165	5·6

TABLE VI.—GLASGOW.—DEATHS AND DEATH-RATES *per Million* IN EACH MUNICIPAL WARD, FOR THE YEAR 1949, AND CORRESPONDING RATES FOR 1948 AND 1947.

MUNICIPAL WARDS.	Deaths 1949	Death-rates		
		1949	1948	1947*
1. Shettleston and Tollcross ...	527	12,459	12,000	12,790
2. Parkhead	282	13,600	12,347	12,688
3. Dalmarnock	569	12,504	12,623	12,700
4. Calton	421	15,403	13,950	16,062
5. Mile-end	474	11,163	12,520	14,693
6. Dennistoun	392	13,735	12,110	14,072
7. Provan	283	14,326	11,527	14,187
8. Cowlairs	359	11,963	12,988	12,023
9. Springburn	292	11,574	11,565	13,095
10. Townhead	472	13,168	12,483	14,868
11. Exchange	259	12,684	13,860	17,027
12. Anderston	443	13,637	12,895	14,013
13. Park	340	13,663	10,787	14,019
14. Cowcaddens	365	12,367	11,143	13,281
15. Woodside	369	12,315	12,659	15,534
16. Ruchill	535	12,689	11,301	11,975
17. North Kelvin	349	12,565	12,575	13,039
18. Maryhill	301	12,022	13,277	12,909
19. Kelvinside	302	14,933	9,966	13,172
20. Partick (East)	331	13,538	11,518	15,515
21. Partick (West)	358	12,237	12,521	13,613
22. Whiteinch	290	12,265	11,943	13,499
23. Yoker	327	11,377	9,946 }	12,434
24. Knightswood	183	11,136	10,573 }	
25. Hutchesontown	424	12,234	11,945	13,330
26. Gorbals	511	12,572	12,762	15,608
27. Kingston	331	11,136	12,128	13,873
28. Kinning Park	343	11,226	11,387	13,480
29. Govan	391	10,413	13,333	12,893
30. Fairfield	292	12,846	10,349	11,709
31. Craigton	439	11,196	9,523 }	12,919
32. Pollokshields	308	12,196	11,657 }	
33. Camphill	338	13,789	12,684	15,236
34. Pollokshaws	282	10,860	10,438	12,512
35. Govanhill	355	12,868	12,564	12,890
36. Langside	343	13,602	11,219	14,762
37. Cathcart	287	12,986	11,301	14,161
Institutions	731	—	—	—
Harbour	5	—	—	—
CITY	14,203	12,795	12,270	13,879

* Rates calculated on new 1948 Ward basis.

TABLE VII.—Glasgow.—Number of Outward and Inward Transfer Deaths for the Year 1949.

Cause of Death.	Outward Transfers	Inward Transfers
1. Typhoid and Paratyphoid Fevers	—	—
2. Cerebrospinal Fever	3	—
3. Scarlet Fever	—	—
4. Whooping Cough	5	—
5. Diphtheria	—	—
6. Erysipelas	—	—
7. Tuberculosis of Respiratory System	40	86
8. Tubercular Meningitis	20	9
9. Abdominal Tuberculosis	2	—
10. Other Tuberculous Disease	9	2
11. Syphilitic Disease	10	6
12. Influenza	2	1
13. Measles	1	—
14. Acute Poliomyelitis and Polioencephalitis	—	—
15. Acute Infectious Encephalitis	—	2
16. Cancer—all forms	381	66
17. Diabetes	30	5
18. Intra-cranial Vascular Lesions	108	49
19. Other Nervous Diseases	32	34
20. Heart Disease	253	170
21. Other Diseases of Circulatory System	52	13
22. Bronchitis	12	7
23. Pneumonia	68	18
24. Other Respiratory Diseases	12	9
25. Ulceration of the Stomach and the Duodenum ...	41	5
26. Diarrhoea (under 2 years)	29	4
27. Appendicitis	31	2
28. Other Digestive Diseases	89	8
29. Nephritis	33	6
30. Puerperal and Post-abortive Sepsis	3	—
31. Other Maternal Causes	9	4
32. Premature Birth	33	10
33. Congenital Malformations, Birth Injury, Infantile Disease	58	24
34. Suicide, Road Traffic Accidents, and other Violent Causes	113	62
35. All Other Causes	225	57
Total	1,704	659

TABLE VIII.—GLASGOW.—DEATHS AND DEATH-RATES *per Million* FROM DIFFERENT CAUSES, FOR THE YEAR 1949, AND CORRESPONDING RATES FOR 1948 AND 1947.

CAUSE OF DEATH.	Deaths	Annual Death-rate per Million.		
	1949	1949	1948	1947
1. Typhoid and Paratyphoid Fevers ...	1	1	—	3
2. Cerebro-spinal Fever	9	8	13	20
3. Scarlet Fever	3	3	3	4
4. Whooping Cough	21	19	6	70
5. Diphtheria	5	4	6	12
6. Erysipelas	2	2	6	4
7. Tuberculosis of Respiratory System	1,121	1,010	1,142	1,066
8. Tubercular Meningitis	94	85	69	152
9. Abdominal Tuberculosis	12	11	29	19
10. Other Tuberculous Diseases ...	35	31	37	53
11. Syphilitic Disease	50	45	41	68
12. Influenza	131	118	33	74
13. Measles	8	7	21	14
14. Acute Poliomyelitis and Polioencephalitis	1	1	3	22
15. Acute Infectious Encephalitis ...	20	18	23	22
16. Cancer—All forms	2,153	1,940	1,877	1,841
17. Diabetes	170	153	132	132
18. Intra-cranial Vascular Lesions ...	1,367	1,231	1,250	1,254
19. Other Nervous Diseases	286	258	223	272
20. Heart Disease	4,028	3,629	3,143	3,417
21. Other Diseases of Circulatory System	409	368	282	276
22. Bronchitis	324	292	221	351
23. Pneumonia	608	548	444	665
24. Other Respiratory Diseases ...	142	128	126	131
25. Ulceration of the Stomach and the Duodenum	124	112	95	111
26. Diarrhoea (under 2 years)	176	158	225	522
27. Appendicitis	31	28	32	24
28. Other Digestive Diseases	263	237	259	304
29. Nephritis	208	187	200	202
30. Puerperal and Post-abortive Sepsis	6	5	8	14
31. Other Maternal Causes	25	23	24	43
32. Premature Birth	237	213	332	392
33. Congenital Malformations, Birth Injury, Infantile Diseases ...	331	298	287	397
34. Suicide, Road Traffic Accidents, and other Violent Causes	547	493	490	502
35. All other Causes	1,255	1,131	1,187	1,426
36. Smallpox	—	—	—	—
ALL CAUSES	14,203	12,795	12,270	13,879

TABLE X.—Glasgow, 1949.—Deaths occurring in Institutions for the Treatment of the Sick, Nursing Homes, &c.

Cause of Death.	General Hospitals and Welfare Institutions.	Fever Hospitals and Sanatoria.	Mental Hospitals.	Voluntary Hospitals	Nursing Homes.	Totals.	% of all Deaths.	Outward Transfer Deaths.
1. Typhoid and Paratyphoid Fevers	—	—	1	—	—	1	100·0	—
2. Cerebrospinal Fever ...	2	4	—	—	—	6	66·7	3
3. Scarlet Fever	—	1	—	—	—	1	33·3	—
4. Whooping Cough	—	14	—	—	—	14	66·7	5
5. Diphtheria	—	5	—	—	—	5	100·0	—
6. Erysipelas	—	1	—	—	—	1	50·0	—
7. Tuberculosis of Respiratory System	124	309	25	—	3	461	41·1	36
8. Tubercular Meningitis ...	7	84	—	—	—	91	96·8	20
9. Abdominal Tuberculosis ...	8	1	1	—	—	10	83·3	2
10. Other Tuberculous Disease	8	17	—	—	1	26	74·3	9
11. Syphilitic Disease	22	2	8	—	1	33	66·0	10
12. Influenza	4	3	2	—	2	11	8·4	2
13. Measles	—	4	—	—	—	4	50·0	1
14. Acute Poliomyelitis and Polioencephalitis ...	—	1	—	—	—	1	100·0	—
15. Acute Infectious Encephalitis	7	—	2	1	1	11	55·0	—
16. Cancer—all forms	849	48	25	7	36	965	44·8	366
17. Diabetes	72	1	3	1	2	79	46·5	30
18. Intracranial Vascular Lesions	373	10	20	13	38	454	33·2	88
19. Other Nervous Diseases ...	96	10	42	2	3	153	53·5	30
20. Heart Disease	712	48	121	35	58	974	24·2	209
21. Other Diseases of Circulatory System	177	8	11	3	8	207	50·6	51
22. Bronchitis	85	12	5	10	2	114	35·2	11
23. Pneumonia	212	137	26	—	1	376	61·8	66
24. Other Respiratory Diseases	46	4	3	3	2	58	40·8	11
25. Ulceration of the Stomach and the Duodenum ...	101	2	2	1	2	108	87·1	41
26. Diarrhoea (under 2 years) ...	46	95	—	—	1	142	80·7	28
27. Appendicitis	26	1	—	—	1	28	90·3	31
28. Other Digestive Diseases ...	178	8	6	2	2	196	74·5	88
29. Nephritis	94	1	7	1	3	106	51·0	32
30. Puerperal and Post-abortive Sepsis	3	3	—	—	—	6	100·0	3
31. Other Maternal Causes ...	17	—	3	—	1	21	84·0	9
32. Premature Birth	149	25	9	—	13	196	82·7	33
33. Congenital Malformations, Birth Injury, Infantile Disease	164	31	15	1	23	234	70·7	57
34. Suicide, Road Traffic Accidents, and other Violent Causes	237	4	14	—	5	260	47·5	93
35. All Other Causes	472	41	19	11	20	563	44·9	209
Year 1949	4,291	935	370	91	229	5,916	41·65	1,574

TABLE IX.—Glasgow, 1949.—DEATHS from

CAUSE OF DEATH.	MALES.													Total Males.
	−1	−2	−5	−10	−15	−20	−25	−35	−45	−55	−65	−75	75+	
1. Typhoid and Paratyphoid Fevers	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2. Cerebro-spinal Fever	3	—	2	—	—	—	—	—	1	—	—	—	—	6
3. Scarlet Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4. Whooping Cough	7	3	2	—	—	—	—	—	—	—	—	—	—	12
5. Diphtheria	—	—	—	2	—	—	—	—	—	—	—	—	—	2
6. Erysipelas	—	—	—	—	—	—	—	—	—	—	—	1	—	1
7. Tuberculosis of Respiratory System	3	5	3	4	4	18	58	109	115	119	101	36	5	580
8. Tubercular Meningitis	2	9	9	11	3	5	2	1	—	1	—	—	—	43
9. Abdominal Tuberculosis	—	—	—	1	—	2	1	—	—	—	—	1	—	5
10. Other Tuberculous Disease	—	2	1	2	1	—	3	2	3	5	3	1	—	23
11. Syphilitic Disease	1	—	—	—	—	—	1	1	—	5	14	11	3	36
12. Influenza	2	1	—	—	—	2	—	—	3	7	13	12	15	55
13. Measles	—	2	—	—	—	—	—	—	—	—	—	—	—	2
14. Acute Poliomyelitis and Polioencephalitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15. Acute Infectious Encephalitis	—	—	—	—	—	—	—	—	2	1	4	2	—	9
16. Cancer—all forms	—	—	—	1	—	—	2	11	63	162	326	332	197	1,094
17. Diabetes	—	—	—	—	—	—	—	5	1	1	9	19	7	42
18. Intra-cranial Vascular Lesions	—	1	—	—	1	—	1	2	11	41	124	212	178	571
19. Other Nervous Diseases	25	2	4	2	2	6	5	9	13	17	23	20	6	134
20. Heart Disease	—	—	—	2	5	6	6	16	55	195	445	710	640	2,080
21. Other Diseases of Circulatory System	—	—	—	—	—	—	1	—	6	19	34	68	91	219
22. Bronchitis	7	—	—	—	—	—	—	2	13	37	49	50	45	203
23. Pneumonia	88	6	6	3	1	7	2	3	11	33	54	66	55	335
24. Other Respiratory Diseases	6	—	—	—	—	—	1	3	3	12	17	22	11	75
25. Ulceration of the Stomach and the Duodenum	—	—	—	—	—	—	3	8	19	20	32	19	4	105
26. Diarrhoea (under 2 years)	100	13	—	—	—	—	—	—	—	—	—	—	—	113
27. Appendicitis	—	—	3	—	1	1	1	1	1	1	2	1	2	14
28. Other Digestive Diseases	7	—	5	2	—	1	2	3	14	8	27	27	30	126
29. Nephritis	—	—	—	—	—	1	5	5	10	12	16	21	21	91
30. Puerperal and Post-abortive Sepsis	—	—	—	—	—	—	—	—	—	—	—	—	—	—
31. Other Maternal Causes	—	—	—	—	—	—	—	—	—	—	—	—	—	—
32. Premature Birth	136	—	—	—	—	—	—	—	—	—	—	—	—	136
33. Congenital Malformations, Birth Injury, Infantile Diseases	162	6	2	2	4	—	1	1	4	2	—	—	—	184
34. Suicide, Road Traffic Accidents and other Violent Causes	27	5	12	25	15	7	15	40	39	37	39	36	40	337
35. Smallpox	—	—	—	—	—	—	—	—	—	—	—	—	—	—
36. All other Causes	13	5	5	9	7	7	5	12	31	73	99	191	211	668
All Causes	589	60	54	66	44	63	115	234	418	808	1,431	1,858	1,561	7,301

Different Causes in Sexes and at several Age-Periods.

CAUSE OF DEATH.	FEMALES.													Total Females.	Total Both Sexes.	Sex Unknown — 1 Year.
	−1	−2	−5	−10	−15	−20	−25	−35	−45	−55	−65	−75	75+			
1. Typhoid and Paratyphoid Fevers	—	—	—	—	—	—	—	—	—	—	1	—	—	1	1	—
2. Cerebro-spinal Fever ...	1	1	—	—	—	—	—	—	—	—	—	1	—	3	9	—
3. Scarlet Fever	—	—	2	1	—	—	—	—	—	—	—	—	—	3	3	—
4. Whooping Cough	8	1	—	—	—	—	—	—	—	—	—	—	—	9	21	—
5. Diphtheria	—	—	1	—	1	—	1	—	—	—	—	—	—	3	5	—
6. Erysipelas	—	—	—	—	—	—	—	—	—	—	—	—	1	1	2	—
7. Tuberculosis of Respiratory System	4	2	5	4	12	58	142	167	81	31	17	14	4	541	1,121	—
8. Tubercular Meningitis ...	2	7	11	8	5	11	3	2	2	—	—	—	—	51	94	—
9. Abdominal Tuberculosis ...	—	—	—	—	—	3	—	—	2	—	2	—	—	7	12	—
10. Other Tuberculous Disease	—	1	1	1	—	2	2	—	1	—	3	1	—	12	35	—
11. Syphilitic Disease ...	—	—	—	—	—	—	—	1	—	4	3	2	4	14	50	—
12. Influenza	1	2	—	1	—	—	—	—	2	1	16	20	33	76	131	—
13. Measles	—	4	1	1	—	—	—	—	—	—	—	—	—	6	8	—
14. Acute Poliomyelitis and Polioencephalitis ...	—	1	—	—	—	—	—	—	—	—	—	—	—	1	1	—
15. Acute Infectious Encephalitis	—	—	—	—	—	—	—	1	3	—	2	1	4	11	20	—
16. Cancer—all forms ...	—	1	1	1	—	1	3	18	67	167	235	355	210	1059	2,153	—
17. Diabetes	—	—	—	—	—	—	—	—	3	10	32	45	38	128	170	—
18. Intra-cranial Vascular Lesions	1	—	—	—	1	—	1	4	15	43	125	286	320	796	1,367	—
19. Other Nervous Diseases ...	30	4	5	4	1	4	3	5	17	28	15	20	16	152	286	—
20. Heart Disease	2	1	—	1	4	6	5	35	46	100	311	584	853	1948	4,028	—
21. Other Diseases of Circulatory System	—	—	—	—	—	—	1	1	3	7	29	52	97	190	409	—
22. Bronchitis	4	—	—	—	2	1	1	1	1	7	16	38	50	121	324	—
23. Pneumonia	65	3	2	2	2	2	—	2	13	11	28	57	86	273	608	—
24. Other Respiratory Diseases	2	1	—	—	—	1	1	2	8	5	10	15	22	67	142	—
25. Ulceration of the Stomach and the Duodenum ...	—	—	—	—	—	—	—	—	5	5	4	1	4	19	124	—
26. Diarrhoea (under 2 years)	57	6	—	—	—	—	—	—	—	—	—	—	—	63	176	—
27. Appendicitis	—	1	—	1	1	2	—	1	2	2	3	3	1	17	31	—
28. Other Digestive Diseases	7	—	1	2	1	1	2	4	8	18	35	30	28	137	263	—
29. Nephritis	—	—	—	—	—	1	2	5	8	20	27	36	18	117	208	—
30. Puerperal and Post-abortive Sepsis	—	—	—	—	—	—	1	2	2	1	—	—	—	6	6	—
31. Other Maternal Causes ...	—	—	—	—	—	—	5	12	7	1	—	—	—	25	25	—
32. Premature Birth	101	—	—	—	—	—	—	—	—	—	—	—	—	101	237	—
33. Congenital Malformations, Birth Injury, Infantile Diseases	121	5	4	2	2	—	4	—	—	4	3	2	—	147	331	—
34. Suicide, Road Traffic Accidents and other Violent Causes	20	2	7	11	3	10	3	11	11	12	24	34	62	210	547	—
35. Smallpox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
36. All other Causes... ...	17	2	3	2	6	3	2	16	19	63	83	160	210	586	1,254	1
All Causes	443	45	44	42	41	106	182	290	326	540	1,024	1757	2061	6901	14202	1

TABLE XI.—GLASGOW.—DEATHS UNDER 1 YEAR AND DEATH-RATES PER 1,000 BIRTHS IN EACH MUNICIPAL WARD, FOR THE YEAR 1949.

MUNICIPAL WARDS.	Deaths —1 Year.	Death Rate per 1,000 Births.		
	1949.	1949.	1948.	1947.
1. Shettleston and Tollcross	47	60	52	77
2. Parkhead	19	49	54	84
3. Dalmarnock	69	66	63	90
4. Calton	49	83	53	111
5. Mile-end	53	55	61	99*
6. Dennistoun	24	50	47	62
7. Provan	21	57	64	98
8. Cowlairs	25	40	60	72
9. Springburn	22	45	66	106
10. Townhead	45	58	54	92
11. Exchange	17	40	50	99*
12. Anderston	44	60	57	72*
13. Park	24	57	53	73*
14. Cowcaddens	35	48	70	85
15. Woodside	31	48	55	67
16. Ruchill	37	45	51	66
17. North Kelvin	19	38	56	86
18. Maryhill	24	51	59	71
19. Kelvinside	12	47	28	62
20. Partick (East)	14	34	36	77
21. ,, (West)	20	35	63	80
22. Whiteinch	12	32	52	59
23. Yoker	15	34	40	55
24. Knightswood	14	58	73	
25. Hutchesontown	55	67	44	69
26. Gorbals	75	74	70	103
27. Kingston	29	40	83	97
28. Kinning Park	23	39	51	75
29. Govan	37	43	71	86
30. Fairfield	10	24	42	67
31. Craigton	20	33	39	47
32. Pollokshields	18	45	40	
33. Camphill	12	39	31	35
34. Pollokshaws	25	50	69	59
35. Govanhill	16	34	50	51
36. Langside	7	21	19	34
37. Cathcart	9	33	20	33
Institutions	5	—	—	—
Harbour	—	—	—	—
CITY	1,033	49	56	77

* Rates recalculated on 1948 basis.

TABLE XII.—Glasgow 1949—Infant Deaths at Given Ages and from Several Causes.

Cause of Death.	Males.						Females.						Total —1 year Both Sexes.	Unknown
	Age in Months.						Age in Months.							
	—1	—3	—6	—9	—12	Total.	—1	—3	—6	—9	—12	Total.		
I. Congenital Malformations	31	8	8	—	1	48	26	10	5	1	2	44	92	—
II. Diseases of early Infancy—														
(a) Congenital Debility, Sclerema, and Icterus	14	6	2	1	—	23	9	2	—	—	1	12	35	—
(b) Premature Birth	127	7	1	1	—	136	93	7	1	—	—	101	237	—
(c) Injury at Birth	40	—	—	—	—	40	19	1	—	—	1	21	61	—
(d) Atelectasis	34	3	—	—	—	37	33	—	—	1	—	34	71	—
(e) Others	12	1	1	—	—	14	9	—	—	—	1	10	24	—
III. Diseases of Respiratory System ...	22	32	30	11	6	101	13	23	26	5	4	71	172	—
IV. Diseases of Digestive System—														
(a) Diarrhoeal	8	44	28	11	9	100	8	16	21	7	5	57	157	—
(b) Others	1	3	1	1	1	7	1	4	1	1	—	7	14	—
V. Diseases of Nervous System ...	4	14	4	2	1	25	4	13	6	6	2	31	56	—
VI. Tuberculous Diseases—														
(a) Pulmonary Tuberculosis	—	—	—	—	3	3	—	1	—	—	3	4	7	—
(b) Tuberculous Meningitis	—	—	—	2	—	2	—	—	1	—	1	2	4	—
(c) Abdominal Tuberculosis	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(d) Other Forms	—	—	—	—	—	—	—	—	—	—	—	—	—	—
VII. Infectious Diseases—														
(a) Measles	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(b) Scarlet Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(c) Whooping Cough	—	2	1	2	2	7	—	1	1	6	—	8	15	—
(d) Diphtheria	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(e) Erysipelas	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(f) Cerebro-spinal Fever	—	1	—	2	—	3	1	—	—	—	—	1	4	—
(g) Varicella	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(h) Typhoid and Paratyphoid Fevers	—	—	—	—	—	—	—	—	—	—	—	—	—	—
VIII. Syphilis	—	—	1	—	—	1	—	—	—	—	—	—	1	—
IX. Overlaying	1	2	1	1	—	5	—	1	1	—	—	2	7	—
X. Other Violence	6	8	6	1	1	22	6	6	4	—	2	18	40	—
XI. All other Causes	3	2	4	2	4	15	5	5	7	2	1	20	35	1
Totals	303	133	88	37	28	589	227	90	74	29	23	443	1,032	1

TABLE XIII.—Glasgow, 1947-1949.—Abstract of Notifications under Notification of Births Act, 1907, and Results of Visits.

	1949	1948	1947
Total Number of Notifications	21,565	23,108	26,794
Doctor at Home	5,171	3,533	4,078
Doctor in Nursing Home	1,778	2,224	2,747
Doctor in Institution	10,500	10,331	10,206
Maternity Hospital (Outdoor) Nurse ...	1,550	2,080	2,790
Midwife in Nursing Home	532	535	477
Certified Midwife	29	1,112	2,277
Municipal Midwife	1,996	3,290	4,210
Others	9	3	9
Total Cards issued	21,159	18,474	21,196
Total Cards returned	20,993	18,695	21,413
Full Information	20,414	18,373	21,055
Doctor found in Attendance	—	—	—
Others	579	322	358

TABLE XIV.—Glasgow, 1947-1949.—Births Notified showing Medically and not Medically Attended.

	1949	1948	1947
Notifications Received—*less Duplicates*—			
Total	21,565	23,108	26,794
Live-births	20,932	22,368	25,954
Still-births	633	740	840
Per cent. Still-births to Total	2·9	3·2	3·1
Medically attended—			
Births at Home	5,171	3,533	4,078
Births in Nursing Home	1,778	2,224	2,747
In Institutions	10,500	10,331	10,206
Total	17,449	16,088	17,031
Per cent.	80·9	69·6	63·6
Still-births at Home	108	96	87
Still-births in Nursing Home	45	44	55
Still-births in Institutions	425	489	532
Not Medically attended—			
Maternity Hospital, Outdoor Nurse ...	1,550	2,080	2,790
Certified Midwives in Nursing Home ...	532	535	477
Certified Midwives in Private Practice	29	1,112	2,277
Municipal Midwives	1,996	3,290	4,210
Others	9	3	9
Total	4,116	7,020	9,763
Per cent.	19	30	36
Still-births	55	111	166

TABLE XV.—Glasgow, 1949 and 1948.—Cases of Infectious Disease Registered and Numbers of these Treated in Fever Hospitals, &c.

	1949				1948			
	Fever Hosp.	Other Institutions	Home	Total	Fever Hosp.	Other Institutions	Home	Total
A.—Notifiable—								
Typhus Fever	—	—	—	—	—	—	—	—
Enteric Fever	2	—	—	2	11	—	1	12
Paratyphoid B	8	—	—	8	2	1	1	3
Continued and Undefined Fever	8	—	—	8	5	—	2	7
Puerperal Fever	181	9	2	192	230	20	—	250
Puerperal Pyrexia	55	40	19	114	64	49	9	122
Smallpox	—	—	—	—	—	—	—	—
Scarlet Fever	1,759	—	572	2,331	2,573	3	1,332	3,908
Diphtheria and Membranous Croup	*152	1	1	*154	286	—	—	286
Erysipelas	165	4	137	306	232	4	244	480
Cholera	—	—	—	—	—	—	—	—
Cerebro-spinal Fever	94	3	4	101	86	6	5	97
Ophthalmia Neonatorum	17	—	115	132	32	—	231	263
Trachoma	—	—	—	—	—	1	3	4
Acute Encephalitis Lethargica	1	1	2	4	1	2	3	6
Acute Polio-Encephalitis	2	—	—	2	1	—	—	1
Acute Poliomyelitis	24	—	4	28	6	—	—	6
Acute Primary Pneumonia	2,234	1,130	1,134	4,498	2,208	1,350	1,165	4,723
Acute Influenzal-Pneumonia	4	12	60	76	8	6	21	35
Malaria	9	—	5	14	14	4	10	28
Dysentery	1,032	8	361	1,401	847	18	313	1,178
Infective Jaundice	3	2	5	10	1	1	—	2
Anthrax	—	—	—	—	—	—	—	—
Pulmonary Tuberculosis	927	—	1,902	2,829	933	—	1,842	2,775
Other Forms of Tuberculosis	158	—	232	390	141	—	232	373
B.—Not Notifiable								
Measles	440	1	3,591	4,032	693	8	7,431	8,132
German Measles	38	—	233	271	14	—	205	219
Whooping-cough	317	—	3,630	3,947	138	1	1,564	1,703
Chickenpox	104	1	3,595	3,700	218	—	6,658	6,876
Mumps	37	—	—	37	35	—	6	41
Pemphigus Neonatorum	9	—	2	11	15	—	4	19
Totals	7,780	1,212	15,606	24,598	8,794	1,473	21,282	31,549
Notified, but diagnosis altered to Non-Infectious Diseases	3,168	1	12	3,181	3,005	1	17	3,023
Total Registered	10,948	1,213	15,618	27,779	11,799	1,474	21,299	34,572

Where patients suffer from two or more diseases, each disease is reckoned as a case.

Apart from cases of pneumonia admitted to Corporation General Hospitals and Voluntary Institutions in times of pressure; cases of puerperal fever, puerperal pyrexia, and ophthalmia neonatorum occurring in other than Fever Hospitals and allowed to remain; and cases of trachoma treated in Stobhill Hospital; the cases shown under the headings "Other Institutions" are, for the most part, accidental.

* Includes 3 Diphtheria Carriers.

Table XVI.—Cases of Infectious Disease Registered in Each Month in 1949.

	Month.												Year.	
	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Hosp.	Home
Typhus Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Enteric, including Paratyphoid Fever	—	—	1	—	—	—	2	1	5	1	—	—	10	—
Continued and Undefined Fever	—	1	1	—	—	1	1	—	—	1	1	2	8	—
Puerperal Fever	16	15	13	15	21	17	20	16	20	10	14	15	190	2
Puerperal Pyrexia	14	8	10	12	5	8	7	11	9	5	11	14	95	19
Smallpox	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Scarlet Fever	297	138	176	161	163	111	82	137	160	267	338	301	1,759	572
Diphtheria and Membranous Croup	23	17	16	8	10*	15*	8	7	10	16	13*	11	153	1
Erysipelas	36	28	39	16	20	21	17	16	23	21	37	32	169	137
Cerebro-spinal Fever	15	8	13	6	3	7	6	4	5	9	8	17	97	4
Ophthalmia Neonatorum	8	10	17	11	12	13	9	12	10	9	11	10	17	115
Trachoma	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Acute and Chronic Encephalitis Lethargica	—	—	—	—	2	—	1	1	—	—	—	—	2	2
Acute Polioencephalitis	—	—	—	—	—	1	—	—	1	—	—	—	2	—
Acute Poliomyelitis	1	—	2	1	1	—	2	7	4	3	5	2	24	4
Acute Primary Pneumonia	927	477	306	372	260	255	177	149	141	231	507	696	3,364	1,134
Acute Influenzal Pneumonia	24	24	7	4	2	1	—	—	1	1	4	8	16	60
Malaria	—	1	3	1	2	—	1	—	5	—	—	1	9	5
Dysentery	53	41	47	62	91	122	94	217	198	146	181	149	1,040	361
Pulmonary Tuberculosis	216	280	283	217	265	241	209	240	201	242	206	229	927	1,902
Other Forms of Tuberculosis	21	44	40	40	45	36	35	39	24	18	19	29	158	232
Measles	72	138	603	873	1,166	800	76	68	68	55	58	55	441	3,591
German Measles	13	15	22	29	37	72	3	2	4	14	26	34	38	233
Whooping Cough	714	687	805	551	587	232	23	82	120	53	51	42	317	3,630
Chickenpox	389	322	413	275	310	286	28	33	167	319	540	618	105	3,595
Total	2,839	2,254	2,817	2,654	3,002	2,239	801	1,042	1,176	1,421	2,030	2,265	24,540	
Hospital	1,130	708	707	733	706	719	537	598	563	687	925	928	8,941	
Home	1,709	1,546	2,110	1,921	2,296	1,520	264	444	613	734	1,105	1,337		15,599
Add Others †													51	7
Altered Diagonsis													3,169	12
													12,161	15,618

* Includes one Carrier.

† 11 Pemphigus Neonatorum; 10 Infective Jaundice; 37 Mumps.

TABLE XVII.

Operations of Sanitary Section.

1. (a) Nuisances.	Central	Northern	Eastern	South-Eastern	South-Western	City 1949	City 1948
Inspections made—							
Nuisances	105,593	165,956	118,324	54,748	130,997	575,618	576,209
Bug Disinfestation ...	1,790	475	1,260	1,207	772	5,504	4,014
Water Storage Cisterns ...	1,122	1,130	1,345	351	—	3,948	3,849
Limewasbings	4,817	14,072	5,352	3,116	8,465	35,822	33,088
Stair Cleaning	2,730	2,380	3,220	2,661	4,517	15,508	25,345
Drain Testing	3,280	3,444	2,635	1,244	4,862	15,465	14,882
Rats and Mice Destruction Acts	5,538	10,197	9,427	5,776	1,181	32,119	40,143
Total	124,870	197,654	141,563	69,103	150,794	683,984	697,530
Nuisances removed or remedied	7,811	16,912	12,321	7,648	15,276	59,968	58,943
Consisting of—							
Apartments, Lobbies, or W.C.'s, with insufficient light or ventilation, or otherwise defective in construction	1	1	—	4	7	13	9
Defective Chimneys causing nuisance	107	148	87	126	120	588	606
Disrepair or dampness in Dwelling-houses	1,239	2,556	1,604	1,319	2,545	9,263	9,090
Offensive smells from Drains, or other reasonable grounds— smoke test	—	—	6	—	—	6	7
Drains, Conductors, Soil-pipes, or Rones choked or defective ...	3,466	6,430	4,230	3,289	5,988	23,403	24,985
Sanitary Fittings choked or defective	471	1,066	589	670	883	3,679	3,968
Dirty Houses and Bedding and Children	8	64	1,356	62	61	1,551	1,451
Dirty Closes, Stairs, etc. (daily and bi-weekly cleaning) ...	68	1,003	229	28	266	1,594	1,674
Houses overcrowded	—	1,497	1,071	—	790	3,358	2,475
Common passages, stairs or staircases not in a cleanly state (limewasbing or painting) ...	1,117	1,142	1,589	142	1,349	5,339	5,464
Animals or Poultry kept so as to be a nuisance	1	2	2	1	4	10	14
Accumulation of Garbage or Rubbish	127	130	35	61	108	461	524
Smells from Decaying Animal Matter or other cause ...	6	11	1	12	10	40	29
Stagnant Water	9	24	2	12	34	81	83
Premises infested with Rats or other vermin	542	740	572	203	1,117	3,174	1,433
Sink accommodation and Water Supply required	—	—	—	4	—	4	—
Water-Closet accommodation required	—	—	—	1	—	1	16
Water Storage Cisterns dirty, uncovered, or unventilated ...	218	599	188	1,000	—	2,005	914
Water Supply Pipes defective— tenants without water ...	44	114	10	62	163	393	455

TABLE XVII.—*Continued.*

OPERATIONS OF SANITARY SECTION—*Continued.*

	Central	Northern	Eastern	South-Eastern	South-Western	City 1949	City 1948
Pit Sbaft without adequate protection	—	1	—	—	—	1	—
Reports to Gas Manager ...	1	—	—	3	2	6	9
,, Master of Works ...	190	747	355	343	1,029	2,664	3,023
,, Superintendent of Cleansing	14	16	33	7	118	188	564
,, Water Engineer ...	182	621	362	299	682	2,146	2,150
Prosecutions—Sheriff Court ...	4	—	3	13	1	21	9
,, Police Court ...	3	12	6	1	2	24	69
Number Successful	7	12	9	14	3	45	70
Amount of Fines	£2 0 0	£1 5 0	£3 0 0	—	10/-	£6 15 0	£38 0 8
Number of Rotation Cards for Cleansing of Common Stairs, Lobbies, and W.C.'s served on Tenants	508	5,496	705	1,022	1,357	9,088	12,008
1. (*b*) Drain Testing.							
Number of Applications for satisfaction of Dean of Guild Court	178	782	318	657	834	2,769	2,774
Number of first Applications to old Tenements or Systems ...	1	4	7	25	7	44	22
Number of these found more or less defective	—	—	6	—	3	9	13
Subsequent applications to old Tenements or Systems ...	—	—	3	—	—	3	14
2. Common Lodging Houses.							
Number measured and registered	—	—	—	—	—	—	—
Total number now on register ...	7	5	7	1	3	23	23
With accommodation for ...	1,815	1,397	2,213	382	943	6,750	7,132
Number of inspections by day	88	93	226	13	52	472	740
Number of inspections by night	—	—	—	—	—	—	—
Number of irregularities ...	7	13	5	1	30	56	83
Number of prosecutions	—	—	—	—	—	—	—
Amount of Fine	—	—	—	—	—	—	—
3. Boarding Houses for Emigrants and Seamen.							
Number measured and registered	1	—	—	—	—	1	—
Total number now on register ...	4	—	1	—	—	5	4
With accommodation for ...	429	—	131½	—	—	560½	495½
Number of inspections by day	1	—	30	—	—	31	61
Number of inspections by night	—	—	—	—	—	—	—
Number of irregularities ...	—	—	—	—	—	—	—
Number of prosecutions	—	—	—	—	—	—	—

TABLE XVII.—*Continued.*

OPERATIONS OF SANITARY SECTION—*Continued.*

	Central	Northern	Eastern	South-Eastern	South-Western	City 1949	City 1948
4. Houses-Let-in-Lodgings.							
Number measured and registered	—	—	—	—	—	—	—
Total number now on register ...	86	—	—	1	24	111	115
Number of inspections by day	193	—	—	1,977	58	2,228	121
Number of inspections by night	—	—	—	—	—	—	20
Number of irregularities ...	12	—	—	—	5	17	18
Number of prosecutions	—	—	—	—	—	—	—
Amount of Fines	—	—	—	—	—	—	—
5. Farmed-out Houses.							
Number measured and registered	—	—	—	—	—	—	—
Total number now on register ...	102	—	98	—	—	200	200
Number of inspections by day	3	—	456	—	—	459	876
Number of inspections by night	—	—	—	—	—	—	—
Number of irregularities ...	18	—	10	—	—	28	78
Number of prosecutions	—	—	—	—	—	—	—
Amount of Fine	—	—	—	—	—	—	—
6. Ticketed Houses.							
Number ticketed for first time	—	—	—	—	—	—	—
Total number now on register ...	1,034	1,475	1,500	—	474	4,483	4,787
Number of visits by day ...	—	—	—	—	—	—	—
Number of inspections by night	—	—	—	—	—	—	—
Number of cases of Overcrowding found and warned ...	—	—	—	—	—	—	—
Number of prosecutions	—	—	—	—	—	—	—
7. Tents and Vans.							
Number of inspections	5	48	201	74	11	339	746
Number of irregularities ...	1	1	4	1	1	8	4
Number of prosecutions	—	—	—	—	—	—	—
8. Mech. Bakehouses.							
Number measured and registered	16	—	3	3	3	25	7
Total number now on register ...	75	61	62	61	33	292	271
Number of inspections	195	247	153	248	93	936	1,002
Number dirty	15	20	13	29	14	91	90
Number Overcrowded	—	—	—	—	—	—	—
Number defective in light or ventilation	1	—	1	1	—	3	6
Number with sanitary convenience required	—	—	—	1	—	1	3
Number with sanitary fittings choked or defective	2	2	—	2	2	8	15
Number of other nuisances ...	8	18	10	5	8	49	35
Number of prosecutions	—	—	—	—	—	—	—

TABLE XVII.—*Continued.*

OPERATIONS OF SANITARY SECTION—*Continued.*

	Central	Northern	Eastern	South-Eastern	South-Western	City 1949	City 1948
9. Non-Mech. Bakehouses.							
Number measured and registered	2	—	1	1	2	6	6
Total number now on register ...	19	27	27	28	21	122	152
Number of inspections	40	114	141	147	46	488	590
Number dirty	6	4	10	7	3	30	32
Number overcrowded	—	—	—	—	—	—	—
Number defective in light or ventilation	—	—	—	1	—	1	2
Number witb sanitary conveniences required	—	—	—	—	—	—	—
Number with sanitary fittings choked or defective	—	—	—	1	—	1	—
Number of other nuisances ...	1	2	2	1	5	11	8
Number of prosecutions	—	—	—	—	—	—	—
10. Mech. Factories.							
Number registered	138	15	57	86	83	379	306
Total number now on register ...	1,507	730	833	646	639	4,355	4,348
Number of inspections	2,473	1,716	2,814	1,980	1,026	10,009	10,011
Number with sanitary conveniences dirty	84	42	77	55	63	321	385
Number defective in light or ventilation	97	18	35	47	55	252	304
Number with sanitary conveniences required	17	2	2	5	14	40	44
Number with sanitary fittings choked or defective	21	23	41	21	42	148	363
Number of other nuisances ...	120	68	58	34	87	367	354
Number of prosecutions	—	—	—	—	—	—	—
Amount of Fine	—	—	—	—	—	—	—
Other parts of factory— Number of other nuisances ...	16	37	39	16	8	116	244
11. Non-Mech. Factories.							
Number measured and registered	36	1	5	31	24	97	61
Total number now on register ...	534	315	137	330	138	1,454	1,266
Number of inspections	694	628	280	1,293	367	3,262	4,422
Number dirty	44	13	8	24	11	100	126
Number overcrowded	—	—	—	—	—	—	—
Number defective in light or ventilation	10	7	—	14	8	39	58
Number with sanitary conveniences required	2	—	—	1	—	3	11
Number with sanitary fittings choked or defective	2	—	4	2	4	12	25
Number of other nuisances ..	24	7	14	11	6	62	77
Number of prosecutions	—	—	—	—	—	—	—

TABLE XVII.—*Continued*

OPERATIONS OF SANITARY SECTION—*Continued.*

	Central	Northern	Eastern	South-Eastern	South-Western	City 1949	City 1948
12. Shops.							
Number of inspections	7,678	3,382	200	1,318	1,904	14,482	3,104
Number dirty	1	17	—	34	18	70	10
Number defective in ventilation, temperature or lighting ...	—	3	—	23	30	56	6
Number with sanitary conveniences required	—	—	—	3	4	7	11
Number with washing facilities required	—	—	—	—	—	—	—
Number with sanitary fittings choked or defective	4	12	3	33	14	66	19
Number of other nuisances ...	22	58	41	101	68	290	346
13. Fish Restaurants.							
Number of inspections	—	136	7	5	50	198	120
Number dirty	2	4	—	3	1	10	6
Number defective in light or ventilation	—	—	—	—	—	—	—
Number requiring sanitary conveniences	—	—	—	1	—	1	—
Number with sanitary fittings choked, etc.	—	—	—	—	—	—	—
Number of other nuisances ...	1	6	3	—	1	11	6
14. Offices.							
Number of inspections	6	107	2	19	3	137	188
Number dirty	—	—	—	—	1	1	6
Number defective in light or ventilation	—	—	—	—	1	1	—
Number with sanitary conveniences required	—	—	—	—	—	—	—
Number with washing facilities required	—	—	—	—	—	—	—
Number with sanitary fittings choked or defective	—	—	—	—	1	1	3
Number of other nuisances ...	2	—	—	—	—	2	12
15. Homeworkers' Dwellings.							
Total number now on register ...	19	24	25	12	18	98	116
Number of inspections	14	21	13	9	8	65	140
Number found dirty	—	—	—	—	—	—	—
16. Bothies, Chaumers.							
Number of inspections	—	—	—	30	7	37	75
Number dirty	—	—	—	—	—	—	—
Number of other nuisances ...	—	—	2	—	—	2	—

TABLE XVII.—*Continued.*

Operations of Sanitary Section—*Continued.*

	Central	Northern	Eastern	South-Eastern	South-Western	City 1949	City 1948
17. Piggeries.							
Total number now on register ...	7	17	20	8	2	54	52
Number of inspections	42	90	199	30	11	372	282
Number found dirty	5	5	10	—	2	22	19
Number of other nuisances ...	—	12	10	—	—	22	12
Number of prosecutions	—	—	—	—	—	—	—
18. Offensive Trades.							
Total number now on register ...	4	5	41	—	2	52	52
Number of inspections	—	35	254	—	1	290	380
Number of irregularities ...	1	1	28	—	—	30	49
Number of prosecutions	—	—	—	—	—	—	—
19. Rag Flock Act, 1911.							
Total number of visits	—	—	—	—	—	—	—
Samples submitted for analysis	—	—	—	—	—	—	—
Certified not to conform to standard	—	—	—	—	—	—	—
Number of prosecutions	—	—	—	—	—	—	—
Number of convictions	—	—	—	—	—	—	—
Amount of fines	—	—	—	—	—	—	—
20. Broker's Premises.							
Total number of visits	—	26	9	21	4	60	58
Number dirty	1	4	—	1	—	6	4
Number of other nuisances ...	—	1	—	—	—	1	3
21. Cemeteries.							
Total number of visits	—	2	1	8	1	12	6
22. Air Raid Shelters.							
Number of inspections	—	196	—	259	119	574	149
Number dirty	12	10	4	1	1	28	—
Number defective in light or ventilation	—	—	—	—	—	—	—
Number with sanitary conveniences choked, etc.	—	—	—	—	—	—	—
Number of other nuisances ...	—	—	—	—	—	—	7

TABLE XVII.—*Continued.*

Operations of Sanitary Section—*Continued.*

	Central	Northern	Eastern	South-Eastern	South-Western	City 1949	City 1948
23. Infectious Diseases, etc.							
Infectious Diseases, visits ...	9,785	13,273	11,235	9,799	9,600	53,692	72,927
Pre-admissions, Country Homes, visits	—	—	—	—	—	—	—
Vaccination visits	23	36	33	9	6	107	2,082
Institutional census	5	—	—	—	—	5	33
Air Raid Precautions visits ...	—	—	—	—	—	—	—
24. Housing Acts.							
Total number of visits	1,127	25,749	11,377	3,069	5,237	46,559	24,065
25. Squatter's Premises.							
Total number of visits	9	—	838	1,276	137	2,260	800
26. Work of Female Inspectors.							
Under the Glasgow Corporation (Police) Order, 1904—							
(*a*) **Verminous Children.**							
Number of visits to schools ...	150	415	405	136	98	1,204	1,274
Number of children submitted for inspection	14,480	33,704	32,757	10,551	10,299	101,791	96,143
Number of children found infested	1	11	351	141	3	507	439
Number of children found infected	3,022	7,906	5,984	2,334	1,442	20,688	18,870
Number of children found with fleas	50	176	139	28	52	445	125
Number of children found dirty	1	47	587	31	137	803	756
Number of written notices ...	9	8	234	82	2	335	467
Number of children cleaned by Guardians	833	2,594	2,957	2,202	1,182	9,768	11,425
Number of children cleaned by officers	—	1	162	9	—	172	288
Number of special visits ...	12	1	116	5	—	134	198
Number of children examined	—	—	—	—	—	—	—
Number of children re-inspected	4,903	12,939	14,767	3,346	3,328	39,283	51,739
Number of infectious diseases	—	5	53	2	2	62	111

TABLE XVII.—*Continued.*

Operations of Sanitary Section—*Continued.*

	Central	Northern	Eastern	South-Eastern	South-Western	City 1949	City 1948
(*b*) Homes of Verminous Children.							
Number of houses inspected ...	340	1,796	4,490	533	539	7,698	8,064
Number of houses in which lodgers were found	5	—	3	—	—	8	21
Number of houses found dirty	—	2	7	3	1	13	1
Number of houses with dirty bedding	—	2	5	3	—	10	2
Number of written notices ...	—	1	12	—	—	13	1
Number of re-inspections ...	7	7	246	20	10	290	161
Number of houses cleaned ...	—	3	8	—	2	13	11
Number of bedding cleaned ...	—	2	7	—	—	9	8
(*c*) House-to-House Visitation.							
Number of houses visited first time	650	32	80	714	20	1,496	2,808
Number of houses in which lodgers were found	41	—	1	—	—	42	24
Number of houses found dirty	—	2	6	5	—	13	9
Number of houses with dirty bedding	—	—	7	5	—	12	12
Number of houses—Written notices...	—	1	15	2	—	18	16
Number of houses—Re-visits...	10	21	12	381	6	430	183
Number of houses found cleaned	6	10	7	4	2	29	44
Number of houses—Bedding found cleaned	6	10	1	2	1	20	14
(*d*) Re-housing Scheme Visitation.							
Number of houses visited first time	2,491	20,604	32,260	4,178	7,138	66,671	66,087
Number of houses in which lodgers were found	832	1,425	3,753	2	—	6,012	6,759
Number of houses found clean	2,206	13,931	15,825	3,735	6,157	41,854	42,667
Number of houses found fair	285	6,618	15,269	428	937	23,537	22,339
Number of houses found unsatisfactory	—	—	—	—	—	—	—
Number of houses found dirty	—	55	1,166	15	44	1,280	1,081
Number of houses with dirty bedding	—	1	236	6	5	248	315
Number of written notices ...	—	—	1,266	2	1	1,269	1,133
Number of re-visits	1	403	1,595	104	72	2,175	2,223
Number of houses found cleaned	—	56	1,071	28	60	1,215	1,021
Number of bedding found cleaned	—	3	236	1	6	246	275

TABLE XVII.—*Continued.*

OPERATIONS OF SANITARY SECTION—*Continued.*

	Central	Northern	Eastern	South-Eastern	South-Western	City 1949	City 1948
(*e*) Intermediate Housing Scheme Visitation.							
Number of houses visited ...	644	2,818	116	172	56	3,806	1,498
Number of houses in which lodgers were found	107	359	27	—	—	493	166
Number of houses found clean	391	2,117	47	136	33	2,724	1,199
Number of houses found fair...	251	637	30	33	17	968	269
Number of houses found unsatisfactory	—	—	—	—	—	—	—
Number of houses dirty ...	2	64	39	3	6	114	30
Number of houses with dirty bedding	1	5	14	3	4	27	8
Number of written notices ...	—	1	46	—	—	47	17
Number of re-visits	—	96	40	39	16	191	86
Number of houses found cleaned	—	38	27	1	14	80	34
Number of bedding found cleaned	—	11	9	—	—	20	16
Number of empty houses visited	—	24	71	—	32	127	147
(*f*) Other Work.							
Number of nuisances reported by Female Inspectors ...	2	119	113	—	3	237	30
Number of infectious disease cases reported by Female Inspectors	3	—	—	—	—	3	3

TABLE XVIII.—GLASGOW.—POPULATION; BIRTHS AND DEATHS; BIRTH-RATES AND DEATH-RATES PER 1,000; ALSO DEATHS UNDER 1 YEAR, AND DEATH-RATES PER 1,000 BIRTHS SINCE 1871.

Year	Population	Births	Deaths	Birth-rate per 1,000	Death-rate per 1,000	Deaths under 1 Year	
						Number	Rate per 1,000 Births
1871 ...	491,900	18,867	15,790	38·4	32·1	3,608	191
1881 ...	512,034	19,106	12,916	37·3	25·2	2,745	144
1891 ...	567,143	19,857	14,324	35·0	25·3	2,946	148
1901 ...	761,925	24,206	16,197	31·8	21·2	3,607	149
1902 ...	762,789	24,722	15,532	32·4	20·4	3,206	129
1903 ...	763,654	25,135	15,073	32·9	19·7	3,663	146
1904 ...	764,521	24,754	15,414	32·4	20·2	3,606	146
1905 ...	765,389	24,316	14,460	31·8	18·9	3,195	131
1906 ...	780,192*	24,560	14,889	31·5	19·1	3,223	131
1907 ...	781,080	24,006	15,659	30·7	20·0	3,116	130
1908 ...	781,969	23,915	15,265	30·6	19·5	3,284	137
1909 ...	782,860	23,140	15,242	29·6	19·5	3,073	133
1910 ...	783,785	22,222	13,395	28·4	17·1	2,694	121
1911 ...	784,680	21,755	13,899	27·7	17·7	3,016	139
1912 ...	785,600	22,044	13,797	28·1	17·6	2,740	124
1913‡...	1,021,789*	28,688	17,693	28·1	17·3	3,706	129
1914 ...	1,028,440	29,462	17,522	28·6	17·0	3,913	133
1915 ...	1,035,091	27,943	20,159	27·0	19·5	4,007	143
1916 ...	1,041,742	27,094	16,601	26·0	15·9	2,996	111
1917 ...	1,048,393	24,030	16,691	22·9	15·9	3,089	129
1918 ...	1,055,044	23,524	18,362	22·3	17·4	2,660	113
1919 ...	1,061,695	25,835	18,237	24·3	17·2	2,937	114
1920 ...	1,068,346	32,626	16,765	31·5	15·7	3,477	107
1921 ...	1,075,000	29,712	15,625	27·6	14·5	3,138	106
1922 ...	1,074,607	28,298	17,850	26·3	16·6	3,401	120
1923 ...	1,074,215	26,710	14,875	24·9	13·8	2,388	89
1924 ...	1,073,822	25,330	16,868	23·6	15·7	3,005	119
1925 ...	1,073,429	25,416	15,336	23·7	14·3	2,591	102
1926 ...	1,090,380*	24,541	15,731	22·7	14·6	2,548	104
1927 ...	1,089,988	23,578	15,439	21·6	14·2	2,527	107
1928 ...	1,089,595	23,649	15,701	21·7	14·4	2,525	107
1929 ...	1,089,202	22,799	17,760	20·9	16·3	2,438	107
1930 ...	1,088,810	23,322	15,455	21·4	14·2	2,355	101
1931 ...	1,088,461	22,926	15,505	21·1	14·2	2,397	105
1932 ...	1,095,263	22,732	16,071	20·8	14·7	2,542	112
1933 ...	1,103,357	21,361	14,747	19·4	13·4	2,061	96
1934 ...	1,115,590	21,822	15,234	19·6	13·7	2,140	98
1935 ...	1,119,414	22,102	15,537	19·7	13·9	2,169	98
1936 ...	1,119,600	22,273	16,406	19·9	14·7	2,429	109
1937 ...	1,119,863	22,176	16,379	19·8	14·6	2,313	104
1938 ...	1,127,825*	21,979	15,016	19·5	13·3	1,919	87
1939 ...	1,128,473	21,682	15,010	19·2	15·0	1,737	80
1940 ...	1,045,333†	20,965	17,603	19·1	16·8	1,983	95
1941 ...	1,045,333	20,365	16,301	18·5	15·6	2,267	111
1942 ...	1,045,333	20,615	14,679	18·8	14·0	1,863	90
1943 ...	1,045,333	22,363	14,824	20·3	14·2	1,825	82
1944 ...	1,050,000	22,203	14,603	20·2	13·9	2,108	95
1945 ...	1,050,000	20,294	13,941	19·3	13·3	1,379	68
1946 ...	1,075,000	23,560	14,502	21·9	13·5	1,588	67
1947 ...	1,100,000	25,829	15,266	23·5	13·9	1,989	77
1948 ...	1,110,000	22,292	13,620	20·1	12·3	1,241	56
1949 ...	1,110,000	20,923	14,203	18·8	12·8	1,033	49

* Extended City.

‡ Births and Deaths from 1913 are corrected for transfers.